



C A R I B B E A N
Q U A R T E R L Y

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The CARIBBEAN QUARTERLY is published four times a year by the Extra Mural Department of the University College of the West Indies.

The CARIBBEAN QUARTERLY offers to West Indians reliable reading on their own history and culture, and on social developments in the Caribbean. It seeks to enable West Indians to keep in touch with significant cultural and social events elsewhere. It aims at fostering contact between persons and institutions active in the field of culture in the Caribbean area. It presents information concerning the University College of the West Indies, reports on the progress of the extra mural work of the University College and provides study-material for that work.

COVER PHOTOGRAPH. The object depicted on the cover is an Amerindian water jug, of presumed Arawak origin. Its size may be judged by the fact that it can contain three and one half pints of liquid.

It was found as a mortuary offering—together with some fragments of decorated platters—in the burial of an adult male Amerindian, closely adjacent to the shellmound at Erin, Trinidad. By comparison of the pottery, there is no doubt that the man was an occupant of the original village. The age of this occupation is unknown, but there is reason to believe that it was before the Colombian discovery—possibly several centuries before.

Points to be noted are the suggestion of a spiral motive in the morphology of the vessel and contra spirals in the painted decoration. These involve the decoration of the head and its unusual position. The conical "cap" on the head is merely the upper portion of a stopper which closes the mouth of the vessel, but its suitability to the general design is of interest.

We are grateful to Mr. Raymond Bastianello, United States Vice-Consul in Trinidad for making the photograph.

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THANKS. The *Caribbean Quarterly* wishes to express its gratitude to the Government of Trinidad and Tobago for allowing the Government Printer to undertake the production of the Journal at a figure which has enabled us to keep the price of the Journal low.

Editorial

IT IS FARTHER from Belize to Port-of-Spain than it is from London straight across Europe to Constantinople ; about as far from Georgetown to Kingston as it is from London to Odessa on the Black Sea coast. The sea has divided the Caribbean peoples, separated them from each other, isolated them.

There are other dividing forces at work in the Caribbean. Race, colour, language, cultural tradition, systems of government, education itself have increased isolation, hindered understanding. Even within the British West Indies these factors have been at work, deepening and strengthening isolation and division. Community has been separated from community, and each community has been further divided within itself by a crazy criss-cross of prejudice and hatred.

The sea no longer completely dominates the lives of the people of the Caribbean. The aeroplane has brought Port-of-Spain within five hours of Kingston, has set Georgetown within two hours of Bridgetown, has put St. Lucia next door to Antigua. The radio has brought London and New York into our dining rooms, and multiplied the opportunities for understanding and for common knowledge. The whole world has contracted, and in the Caribbean distance is losing its meaning.

Other powerful integrating forces are at work, making themselves manifest in every aspect of our social life. We have become more fully aware of each other, of common needs, desires, aspirations.

Education can be one of these strong uniting forces ; education not as a ritual confined to the narrow and immature years of the school-room, but as a process rich and deep as life itself ; not formal and static but vital and dynamic.

Throughout the Caribbean there are groups of men and women who are coming together to learn—to deepen their intellectual interests, to find out through discussion and reading more about themselves, their history, the lands in which they live, the world round about them. This journal is published for these men and women ; not only for members of extramural classes but for all men and women who seek after knowledge ; to be a bond between them, and to give them information about each other.

The *Caribbean Quarterly* seeks to do more. It will work in co-operation with those literary journals which have contributed to the cultural development of the Caribbean. It will concentrate its attention on social and educational movements that are of general significance. It will aim at accuracy, objectivity, and clean thought, clearly expressed. Above all it seeks to establish and strengthen the tradition of the book and of learning in the Caribbean.

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A Jamaica Slave Plantation

ULRICH B. PHILLIPS

This article is reprinted by kind permission of THE AMERICAN HISTORICAL REVIEW—(from Vol. XIX, No. 3). We hope to follow it in our next issue of CARIBBEAN QUARTERLY with an article by James Wright, B.Sc., of the Department of Agriculture, Jamaica, on the Lucky Hill Community Project. These two accounts span a period of 150 years of West Indian development and taken together show something of the startling changes in agricultural production and in the lives of the people.—Ed.

WHEN LORD CHESTERFIELD endeavoured in 1767 to buy his son a seat in Parliament, he learned "that there was no such thing as a borough to be had now, for that the rich East and West Indians had secured them all at the rate of three thousand pounds at least". The nabobs from the Antilles were rivalling those from India in their display. The sugar islands were the most cherished of the imperial possessions, and the sugar estates were the greatest and most famous industrial enterprises in the world. Bulky descriptions of the West Indian regime, of an excellence never attained by the accounts of the continental colonies, found sale in large editions, and few were the moneyed men of England who felt no stir at the rumours of Jamaica planters' profits. But Jamaica's heyday was already waning, for her soils were becoming depleted and sugar prices had fallen. Of the three chief writers on Jamaica in the later eighteenth century, Long, Edwards, and Beckford, the two last illustrated in their own lives the extremes of planters' fortunes. Edwards was one of the nabobs who sat in the British House of Commons, but Beckford wrote his *Descriptive Account of Jamaica* in the fleet prison where he lay in 1790, an insolvent debtor at the end of a planting career.

ROSE PRICE, ESQ.—HIS GREAT PLANTATION BOOK

Rose Price, Esq., was the manager of Worthy Park plantation and its outlying properties in St. John's Parish, Jamaica, belonging to "Robert Price of Penzance in the Kingdom of Great Britain Esquire"; and Rose Price had an eye to the edification of posterity. Seeing that "the Books of Estates are the only Records by which future Generations can inform themselves of the management of plantations", he set directions in detail for the making and preservation of elaborate accounts of current operations. The special books for the sugar mill, the rum distillery, the commissary, and the field labour routine, which he ordered to be kept, have apparently been lost; but the "great plantation book" for the years from 1792 to 1796 inclusive has survived and come to my hands. This comprises yearly inventories, records of the increase and decrease of slaves and draught animals, vestry returns, salary lists, vouchers, crop summaries, and accounts of the receipt and distribution of implements, clothing, food-stuffs, and other supplies.

WORTHY PARK PLANTATION

This plantation, which in its organization and experience appears to have been fully typical of the estates of the largest scale, lay near the centre of the island, perhaps 20 miles from the sea, on the rugged slope of the mountain chain. One of its dependencies was Spring Garden "cattle pen", lying higher on a near-by mountainside and serving as a place of recuperation for slaves and cattle as well as yielding a few oxen and some foodstuffs for the plantation. The other was Mickleton, presumably a farmstead used as a relay station for the teams hauling sugar and rum to Port Henderson, where they were embarked for Kingston on the way to market at London. The plantation itself probably contained several thousand acres, of which about 560 were in sugar-cane, several score in guinea-grass for grazing, and a few in plantain and cocoa groves, while the rest was in woodland with occasional clearings where the Negro families cultivated their own food crops in their hours of release from gang labor.

A cane field was not ripe for its first harvest (the "plant cane") until the second winter after its planting. When the stalks were then cut, new shoots ("ratoons") would spring up from the old roots and yield a diminished second crop the next winter, and so on for several years more, the output steadily growing smaller. After the fourth crop, according to the routine on Worthy Park, the field was planted anew. Thus in any year, while 560 acres were in constant cultivation, about one-fifth of the fields were freshly planted and four-fifths were harvested.

The slaves on the estate at the beginning of 1792 numbered 355, of whom 150 constituted the main field gangs; 34 were artificers and gang foremen; 40 were watchmen, gardeners, and cattle tenders; 13 were in the hospital corps; 22 were on the domestic staff; 24 girls and boys made up the "grass gang"; 39 were young children; and 33 were invalids and superannuated. From the absence of indications that any of these were freshly imported Africans it may be assumed that all were seasoned Negroes. The draught animals comprised 80 mules and 140 oxen. The stock of slaves was not adequate for the full routine of the plantation, for in this year "jobbing gangs" from the outside were employed at a cost of £1,832. The jobbing contracts were recorded at rates from 2s. 6d. to 3s. per laborer per day.

SEASONING

During the year the proprietor began to make additions to his working force, with a view apparently to dispensing with the services of jobbing gangs. In March he bought ten new Africans, five men and five women; and in October 90 more, comprising 25 men, 27 women, 16 boys, 16 girls, and six children, all new Congoes. In 1793 he added 81 more, 51 males and 30 females, part Congoes and part Coromantees, and nearly all of them about 18 to 20 years old.

The advice of experienced planters was entirely opposed to such a proceeding as this. Edward Long, for example, had written:

"The introduction of too many recruits at once has sometimes proved fatal to them. It is very evident, that a small number can be much easier and better provided for, lodged, fed, and taken care of, than a multitude. The planter therefore, who buys only eight or ten at a time, will in the end derive more advantage for them, than the planter who buys 30; for, by the greater leisure and attention in his power to bestow upon them, he will greatly lessen the ordinary chances against their life, and the sooner prepare them for an effectual course of labor. The comparison, indeed, founded

upon fact and observation, is, that, at the end of three years, the former may possibly have lost one-fifth, but the other will most probably have lost one-half, of their respective numbers."

All of the island authorities who wrote on the subject endorsed these precepts, but the Worthy Park administration was nothing daunted thereby. Thirty new huts were built; special cooks and nurses were detailed for the service of the new Negroes; and quantities of special food-stuffs were bought—yams, plantains, flour, fresh and salt fish, and fresh beef heads, tongues, hearts and bellies; but it is not surprising to find that the next outlay for equipment was for a large new hospital in 1794, costing £341 for building its brick walls alone. The emergency became pressing. Some of the newcomers, as was common in such cases, developed yaws. These had to be lodged in an isolation hospital tended by a special nurse and cook, and worked, when worked at all, in a separate gang under a separate foreman. But yaws was a trifle as compared with dysentery—the "bloody flux" as it was then called. Pleurisy, pneumonia, fever, and dropsy had also to be reckoned with. About 50 of the new Negroes were quartered for several years in a sort of hospital camp at Spring Garden, where the work for even the able-bodied was much lighter than on Worthy Park.

With the spring of 1794 the period of heavy mortality began. From the damaged manuscript one gathers that 52 died in that year, mainly from dysentery. But by 1795, this disease was no longer epidemic. Of the 23 who died that year, at least five were new Negroes, two of these dying from dirt-eating, one from yaws and two from ulcers. The three years of the seasoning period were now ended, with about three-fourths of the number imported still alive. This loss was perhaps less than was usual in such cases; but it demonstrates the strength of shock involved in the transplantation from Africa, even after the severities of the "middle passage" had been survived, and after the most debilitated Negroes had been culled out at the ports. In 1796 the new Negroes were no longer discriminated in the mortality record. The outlay for jobbing gangs declined to £1,374 in 1793 and to £506 in 1794. It rose to £632 in 1795, but disappeared in the final year of the record.

ORGANISATION OF SLAVE LABOUR

The list of slaves made at the beginning of 1794 is the only one in which full data are preserved as to ages, colours, health, and occupation. The ages given were of course in many cases mere approximations. First are listed the "great house Negroes",¹ then the slaves of the overseer's house.² In the nursing and

1 No.	Work	Colour	Age	2 No.	Work	Colour	Age		
2	Housekeepers	...	S	40	1	Housekeeper	...	M	27
1	Housekeeper	...	M	19	1	Housekeeper	...	S	24
1	Housekeeper	...	M	8	1	Housekeeper	...	B	60
1	Waiting-boy	...	M	20	1	"Simstress"	...	M	13
1	Waiting-boy	...	M	19	1	"Simstress"	...	M	14
1	Waiting-boy	...	B	10	2	Washers	...	B & M	35 & 19
1	Washer	...	B	55	1	Cook	...	B	
1	Washer	...	S	26	1	Waiting-boy	...	B	21
1	Cook	...	B	50	1	Waiting-boy	...	B	15
1	(manumitted)	...	Q		1	Waiting-boy	...	B	14

COLOUR S—Sambo (black and mulatto mixed)
M—Mulatto

B—Black
Q—Quadroon.

industrial groups all were black except one mulatto boy of ten years, a hog tender. Will Morris, with a 60 year old midwife, two younger nurses and two older women, an old man and "Blind Olive" to tend the new Negroes. Four old women were in charge of children, one having charge of the suckling children of women in the gangs. There were two cooks to the big gang (one had lost a hand) and one to the second gang. A 35 year old with elephantiasis was groom, and two women of 60 had charge of the poultry house. A ruptured man and a "distempered man" along with the mulatto boy, tended the hogs, and nine others, mainly old people, were engaged in mending pads, gathering grass and feeding the hogs.

Next are listed the watchmen, 31 in number, ranging from 27 to 75 years in age, and all black but the mulatto foreman. Only six were described as able-bodied. Among the disabilities mentioned were a bad sore leg, a broken back, lameness, partial blindness, distemper, weakness, and cocobees. The number in this night-watch was apparently not unusual. When the cane crop was green it might be severely damaged by the invasion of hungry cattle, and when it approached maturity a spark might set the fields into conflagration. A law of Barbados, in precaution against fire, prohibited the smoking of tobacco on paths bordering cane-fields.

A considerable number of Negroes already mentioned were in such condition that little work could be required of them. Those completely laid off were nine superannuated, two men and seven women ranging from 70 to 85 years old; four invalids from 14 to 35; and three women relieved from work, as by law required, for having reared six children each.

Among the tradesmen, virtually all the blacks were stated to be fit for field work, but the five mulattoes and the one quadroon, though mostly youthful and healthy, were described as not fit for the field. There were 11 carpenters, eight coopers, four sawyers, two blacksmiths, three masons, and 12 cattlemen, each squad with a foreman; and there were two ratcatchers. The tradesmen were all in early manhood or middle age except Old Quashy, the head carpenter, Old England, a sawyer, three cattlemen between 60 and 65, and Reeves and Little Sam, cattle boys, of 15 and 14 years. There were also two ratcatchers, who followed an essential trade.¹

In the "weeding gang", a sort of industrial kindergarten in which most of the children from five to eight years old were kept, as much for control as for achievement, there were 20 pickaninnies, all black, under Mirtilla as "driveress", who had borne and lost seven children of her own. Thirty-nine children were too young for the weeding gang, at least six of whom were quadroons. Two of these children, Joanne's Henry Richards, quadroon, and Joanne's Valentina, whose colour is

¹ Beckford writes—The rats are very great enemies to this plant, but particularly in proportion to its advance to ripeness. It will hardly be credited what destruction they annually commit upon a plantation: in a not less proportion do they injure the crops than a diminution of five hogsheds of sugar in every hundred. Many and unremitting endeavours are daily put into practice for their extirpation . . . great numbers are taken off by poison immediately after the crop, and when their natural food is apparently exhausted; many are killed by dogs; and prodigious quantities destroyed by the negroes in the fields, when the canes are cut; and such innumerable proportions by the watchmen who are dispersed over the different parts of the plantation, that I was informed by a man of observation and veracity, that upon the estate of which, as overseer, he had charge, not less than thirty and nine thousand were caught by the latter, and, if I remember right, in the short space of five or six months.

not stated, were manumitted in 1795. Fifty-five, all new Negroes of about 20-21 years old, except Darby the foreman, and including Blossom the infant daughter of one of the women, comprised the Spring Garden squad. Seventeen of the number died within the year.

The "big gang" on Worthy Park numbered 137, comprising 64 men and 73 women, four of the women and nine of the men, including Quashy, 60, the "head driver" or foreman, were past 40 years. The gang included a "head road wainman" and ploughman of 23, a "head home wainman", head mule man, boiler, and 2 distillers, all of 40, one distiller of 25, two sugar potters of 45, two "sugar-guards" of 25 for the wagons carrying the crop to port. All members of the gang were described as healthy, able-bodied, and black. It was this battalion of the stalwart, armed with hoes and "bills" (sugar knives), whose work would "make or break" the proprietor. A considerable number in the gang were new Negroes, but only seven of the whole died in this year of heaviest mortality.

The "second gang" employed in a somewhat lighter routine under Sharper, 50, as foreman, comprised 40 women, and 27 men ranging from 15 to 60 years old, all black. While most of them were healthy, five were consumptive, four were ulcerated, one was "inclined to be bloated", one was "very weak", and Pheba was "healthy but worthless". Eleven of this gang died within the year.

Finally, in the third or "small gang", for yet lighter work under Baddy as driveress with Old Robin, 60, as assistant, were listed 68 boys and girls, all black mostly between 12 and 15 years old, but including Mutton, 18, and Cyrus, six. Cyrus and the few others below the normal age may have been allowed to join this gang for the companionship of brothers or sisters, or some of them may have been among Baddy's own four children. Five of the gang died within the year.

Among the 528 slaves all told—284 males and 244 females—74, equally divided between the sexes, were 50 years old and upwards. If the number of the new Negroes, virtually all of whom were doubtless in early life, be subtracted from the gross, it appears that one-fifth of the seasoned stock had reached the half-century, and one-eighth were 60 years old and over. This is a good showing of longevity.

CHILDBIRTH AND CHILD REARING

About 80 of the seasoned women were within the age limits of childbearing. The births entered in the chronological record averaged nine per year for the five years covered. This was hardly half as many as might have been expected under favourable conditions. Rose Price entered special note in 1795 of the number of children each woman had borne during her life, the number of these living at the time this record was made, and the number of miscarriages each woman had had. The total of births thus recorded was 345; of children then living 159; of miscarriages 75. Old Quasheba and Betty Madge each had borne 15 children; and 16 other women had borne from six to 11 each. On the other hand, 17 women of 30 years and upwards had had no children and no miscarriages.

The childbearing records of the women past middle age ran higher than those of the younger ones, to a somewhat surprising degree. Perhaps conditions on Worthy Park had been more favourable at an earlier period, when the owner and his family may possibly have been resident there. The fact that more than half of

the children whom these women had borne were dead at the time of the record comports with the reputation of the sugar colonies for heavy infant mortality. With births so infrequent and infant deaths so many, it may well appear that the notorious failure of the island-bred stock to maintain its own numbers was not due to the working of the slaves to death.

The poor care of the young children may be attributed largely to the absence of a white mistress, an absence characteristic of the Jamaica plantations. The only white woman mentioned in the parish returns to this estate was Susannah Phelps, doubtless the wife of Edward Phelps, who drew no salary but received a yearly food allowance "for saving deficiency", and who probably lived not on Worthy Park but at Mickleton.

WHITE STAFF

In addition to Rose Price, who was not salarised, but who may have received a manager's commission of 60 per cent. upon gross crop sales as contemplated in the laws of the colony, the administrative staff of white men on Worthy Park comprised an overseer at £200, later £300 a year, and four bookkeepers at £50 to £60. There was also a white carpenter at £120, and a white ploughman at £56. The overseer was changed three times during the time of the record, and the bookkeepers were generally replaced annually. The bachelor staff were most probably responsible for the mulatto and quadroon offspring and were doubtless responsible also for the occasional manumission of women and children. In 1795 and perhaps in other years the plantation had a contract for medical attendance by "J. Quier and G. Clark" at the rate of £140 per year.

PROCESS OF PRODUCTION

There is no true summer and winter in Jamaica, but a wet and dry season instead—the former extending generally from May to November, the latter from December to April. The sugar-cane got its growth during the rains; it ripened and was harvested during the drought. If things went well the harvest, or "grinding", began in January. All available hands were provided with bills and sent to the fields to cut the stalks and trim off their leaves and tops. The tainted canes were laid aside for the distillery; the sound ones were sent at once to the mill. On the steepest hillsides the crop had oftentimes to be carried on the heads of the Negroes or on the backs of mules to points which the carts could reach.

The mill consisted merely of three cylinders, two of them set against the third, turned by wind, water, or cattle. The canes, tied into small bundles for better compression, were given a double squeezing while passing through the mill. The juice expressed found its way through a trough into the "boiling house" while the "mill trash" or "megass" was carted off to sheds and left to dry for later use as fuel under the coppers and stills.

In the boiling house the cane-juice flowed into a large receptacle, the clarifier, where by treatment with lime and moderate heat it was separated from its grosser impurities. The juice then passed into the first copper, where evaporation by boiling began. This vessel on Worthy Park was of such a size that in 1795 one of the Negroes fell in while it was full of boiling liquor and died ten days after his scalding. After further evaporation in smaller coppers the juice, now reduced to a syrup, was ladled into a final copper, the teache, for a last boiling and concentration; and when the product of the teache was ready for crystallization it was carried to the "curing house".

The mill, unless it were a most exceptional one for the time, expressed barely two-thirds of the juice from the canes ; the clarifier was not supplemented by filters ; the coppers were wasteful of labor and fuel. But if the apparatus and processes thus far were crude by comparison with modern standards, the curing process was primitive by any standard whatever. The curing house was merely a roof above, a timber framework on the main level, and a great shallow sloping vat at the bottom. The syrup from the teache was potted directly into hogsheads resting on the timbers, and was allowed to cool with too great rapidity and with occasional stirrings which are said by modern critics to have hindered more than they helped the crystallization. Most of the sugar stayed in the hogsheads, while the mother liquor, molasses, still carrying some of the sugar, trickled through perforations in the hogshead bottoms into the vat below. When the hogsheads were full of the crudely cured, moist, and impure "muscovado" sugar they were headed up and sent to port. The molasses was carried to vats in the distillery where with yeast and water added it fermented and when passed twice through the distilling process yielded rum.

The grinding season, extending from January to spring or summer according to the speed of harvesting, was the time of heaviest labor on the plantations. If the rains came before the reaping was ended the work became increasingly severe, particularly for the draught animals, which must haul their loads over the muddy fields and roads. On Worthy Park the grinding was ended in May in some years ; in others it extended to July.

As soon as the harvest was ended preparations were begun for replanting the fields from which the crop of third ratoons had just been taken. The chief operation in this was the opening of 'broad furrows' or "cane holes" about six feet apart. Five ploughs were mentioned in the Worthy Park inventories, but only three ploughmen were listed, one hired white and two Negro slaves. Some of the hillside fields were doubtless too rough for convenient ploughing, and the heat of the climate prevented the use of teams for such heavy work more than a few hours daily ; but the lack of thrift and enterprise was doubtless more influential. The smallness of the area planted each year demonstrates that the hoe was by far the main reliance. After the cane holes were made and manure spread, four canes were laid side by side continuously in each furrow, and a shallow covering of earth was drawn over them. This completed the planting process.

The holing and the planting occupied the major part of the "big gang" for most of the summer and fall. Meanwhile the wagons were hauling the sugar and rum to port, and the second and third gangs, with occasional assistance from the first, were cleaning the grass and weeds from the fields of growing cane and stripping the dry leaves from the stalks and drawing earth to the roots. With the return of the dry season cordwood must be cut in the mountains and brought to the boiling house to supplement the megass, and the roads and the works must be put in order for the stress of the coming harvest. Then came Christmas when oxen were slaughtered for the Negroes and a feast was made and rules relaxed for a week of celebration by Christians and pagans alike.

REWARDS AND PUNISHMENTS

Rewards for zeal in service were given chiefly to the "drivers" or gang foremen. Each of these had for example a "doubled milled cloth coloured great coat" costing

11s. 6d. and a "fine bound hat with girdle and buckle" costing 10s. 6d. As a more direct and frequent stimulus a quart of rum was served weekly to each of three drivers, three carpenters, four boilers, two head cattlemen, two head mulemen, the "stoke-hole boatswain", and the black doctor, and to the foremen respectively of the sawyers, coopers, blacksmiths, watchmen, and road wainmen, and a pint weekly to the head home wainman, the potter, the midwife, and the young children's field nurse. These allowances totalled about 300 gallons yearly. But a considerably greater quantity than this was distributed, mostly at Christmas perhaps, for in 1796 for example 922 gallons were recorded of "rum used for the Negroes on the estate". Upon the birth of each child the mother was given a Scotch rug and a silver dollar.

No records of whippings appear to have been kept, nor of crimes or misdemeanors except absconding. In the list of deaths for 1793, however, it was noted that Roman was shot and killed by a watchman on the neighbouring estate while stealing provisions from the Negro grounds. The account gives a quarterly list of runaway slaves, with a few listed at each quarter, most of the fugitives appearing to return of their own free will. Obviously the impulse to run away was not confined to either sex nor to any age or class. The fugitives were utterly miscellaneous and their flights were apparently not organised but sporadic.

TRIBAL ORIGINS AND TRIBAL QUALITIES

These conclusions seem to be borne out by an analysis of the notices of runaway slaves published by the workhouse in the newspapers. Throughout the year 1803, for which I have procured these statistics from a file of the *Royal Gazette* of Kingston, the number of runaways taken into custody each week was fairly constant; and no group of slaves appears over-represented. Of the grand total of 1,721 runaways advertised as in custody, 187 were merely stated to be Negroes without further classification, 426 were "creoles", i.e., native Jamaicans; and the neighbouring islands had scattering representations. Sixty per cent. (1,046) were of African birth. Of these 101 were Mandingoes from Senegambia and the upper Niger; 60 were Chambas from the region since known as Liberia; 70 were Coromantees from the Gold Coast; 33 were Nagoes and 24 Pawpaws from the Slave Coast (Dahomey); and 185 were Eboes and 97 Mocoos from the Bight of Benin. All of the foregoing were from regions North of the equator. From the Southern tropic there were 185 Congoes, 165 Mungolas, and 94 Angolas. The remaining 30 were mostly from places which I have not been able to identify in maps old or new. Only one, a Gaza, was positively from the East coast of Africa.

The Congoes and Coromantees, the tribal stocks with which Worthy Park was chiefly concerned, were as wide apart in their characteristics as Negro nature permitted. The former were noted for lightness of heart, mildness of temper, and dullness of intellect. Of the latter Christopher Codrington, Governor of the Leeward Islands, wrote in 1701 to the British Board of Trade:

The Coromantees, . . . are not only the best and most faithful of our slaves, but are really all born Heroes. . . . There never was a raskal or coward of that nation, intrepid to the last degree, not a man of them but will stand to be cut to pieces without a sigh or groan, grateful and obedient to a kind master, but implacably revengeful when ill-treated. My father, who had studied the genius and temper of all kinds of negroes 45 years with a very nice observation, would say, Noe man deserved a Corramante that would not treat him like a Friend rather than a Slave.

Byran Edwards endorsed the staunchness and industry of the Coromantees, but attributed to them the plotting of the serious Jamaica revolt of 1760.

A large proportion of the fugitive slaves in custody were described as bearing brands on their breasts or shoulders. It is not surprising to find in a Worthy Park inventory "1 silver mark LP for negroes". Edwards wrote that a friend of his who had bought a parcel of young Ebo and Coromantee boys told him that at the branding,

when the first boy, who happened to be one of the Eboes, and the stoutest of the whole, was led forward to receive the mark, he screamed dreadfully, while his companions of the same nation manifested strong emotions of sympathetic terror. The gentleman stopped his hand ; but the Koromantyn boys, laughing aloud, and, immediately coming forward of their own accord, offered their bosoms undauntedly to the brand, and receiving its impression without flinching in the least, snapt their fingers in exultation over the poor Eboes.

PLANTATION ECONOMICS

Worthy Park bought nearly all of its hardware, dry goods, drugs and sundries in London, and its herrings for the Negroes and salt pork and beef for the white staff in Cork. Staves and heading were procured locally, but hoops were imported. Corn was cultivated between the rows in some of the cane fields on the plantation, and some guinea-corn was bought from neighbours. The Negroes raised their own yams and other vegetables, and doubtless pigs and poultry as well. Plantains were likely to be plentiful, and the island abounded in edible land crabs.

Every October cloth was issued, at the rate of seven yards of osnaburgs, three of checks, and three of baize for each adult, and proportionally for children. The first was to be made into coats, trousers, and frocks, the second into shirts and waists, the third into bedclothes. The cutting and sewing were done in the cabins. A hat and a cap were also issued to each slave old enough to go to the field, and a clasp-knife to each one above the age of the third gang. The slaves' feet were not pinched by shoes.

The Irish provisions cost annually about £300, and the English supplies about £1,000, not including such extra outlays as that of £1,355 in 1793 for new stills, worms and coppers. Local expenditures were probably reckoned in currency. Converted into sterling, the salary list amounted to about £500, and the local outlay for medical services, wharfage, and petty supplies came to a like amount. Taxes, manager's commissions, and the depreciation of apparatus must have amounted collectively to £800. The net death-loss of slaves, not including that from the breaking-in of new Negroes, averaged about two and a quarter per cent. ; that of the mules and oxen ten per cent. When reckoned upon the numbers on hand in 1796 when the plantation, with 470 slaves, was operating with no outside help, these losses, which must be replaced by new purchases if the scale of output was to be maintained, amounted to about £900. Thus a total of £3,000 sterling is reached as the average current expense in years when no mishaps occurred.

The crops during the years of the record averaged 311 hogsheads of sugar, 16 cwt. each, worth in the island about £15 sterling per hogshead, and 133 puncheons of rum, 110 gallons each, about £6,000, and the net earnings of the establishment not above £3,000. The investment in slaves, mules, and oxen was

about £28,000, and that in land, buildings, and equipment, according to the general reckoning of the island authorities, reached a similar sum. The net earnings in good years were thus barely more than five per cent. on the investment ; but the liability to hurricanes, earthquakes, fires, epidemics, and mutinies would lead conservative investors to reckon the safe expectations considerably lower. A mere pestilence which carried off about 60 mules and 200 oxen on Worthy Park in 1793-1794 wiped out more than a year's earnings.

Byran Edwards gave statistics showing that between 1772 and 1791 more than one-third of the 767 sugar plantations in Jamaica had gone through bankruptcy, 55 had been abandoned, and 47 new ones established. It was generally agreed that, within the limits of efficient operation, the larger a plantation was, the better its prospects for net earnings. But though Worthy Park had more than twice the number of slaves that the average plantation employed, it was barely paying its way.

Some Aspects of Botany

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Botany is the science that deals with plants and plant life. This brief article is intended to give the reader an example of the kind of work which botanists do.

PEOPLE WHO ARE INTERESTED in growing plants, whether as gardeners or farmers, know that to obtain the best results one must supply the plant with nutriment. The fact has indeed been known from the earliest times and it has long been the practice to apply animal manure to the soil. But there is not an unlimited supply of natural manures and nearly 200 years ago it was stated that in less than 100 years from that time the human race would cease to multiply because it would be impossible to grow enough food to support any further increase in population. This prophecy has not yet materialised, thanks largely to increased crop production brought about by the use of artificial fertilisers.

What does the growing plant need for its nourishment ? Scientists asked themselves this question many years ago, and the story of the search for an answer is a long and interesting one.

Let us imagine ourselves in the laboratory of the famous German botanist Sachs about 90 years ago. He was deeply interested in this question. The problem was far from clear at that time but he knew certain facts. He was certainly aware of a significant experiment that had been performed by a Dutch chemist named Van Helmont, over 200 years earlier. Van Helmont planted a willow twig, weighing 5 lb., in a pot containing 300 lb. of dry soil. The pot was covered and the plant was given nothing but water. At the end of five years the willow had grown to a small tree weighing 164 lb. and the soil weighed only 2 oz. less than at the start. Van Helmont somewhat naturally concluded that the tree had made all its growth from the water taken in. It was a wrong conclusion, as Sachs would know, but a very sound experiment. It was the first indication that green plants do not absorb their nutriment as animals do from complex organic compounds. It thus exploded a view which had been held from the time of Aristotle.

In considering this experiment Sachs would have a great advantage over Van Helmont. As a result of the work of others in this branch of botany it had become evident that a plant would not grow in pure water, that the minerals absorbed from the soil were of supreme importance to plant growth, and that the bulk of the dried plant body is made up of compounds of the element carbon. Furthermore it was known to Sachs that the carbon was taken into the plant from the atmosphere. He thus knew the true explanation of the experiment. The 2 oz. loss from the soil represented the intake of mineral elements by the plant and the increase in dry weight, *i.e.* the growth of the plant, was in the main due to absorption of carbon dioxide from the air by the green leaves in the presence of sunlight.

But the problem still remained as to what the plant actually required from the soil. Plants had been analysed chemically and a fair idea of their mineral components obtained. Attempts had been made to find out if all these chemical elements were essential for their healthy growth. This had been done by growing plants in sand and watering them with solutions containing various chemicals. A great deal of useful information had been found but there was still grave doubt about the necessity for certain elements.

Sachs knew all this. One can imagine him turning the problem over in his mind and deciding that in such experiments it was never certain that the sand was chemically pure or even that the pots themselves did not liberate something into the solution. He decided to do without a solid rooting medium altogether, and grow the plants with their roots dipping into water to which was added small quantities of the mineral elements.

He therefore took glass cylinders capable of holding about two pints of liquid and filled them with a weak solution containing compounds of those elements found in plants by the analysts of his day. He selected seedlings of bean and maize and, loosely supporting them, inserted their roots into the solution. More solution was added as it was absorbed by the plants. The plants thrived. He therefore repeated the experiments many times with great care, leaving out one or other mineral element each time, and he noted the results on plant growth. When the plants failed to grow he concluded that he had left out an essential mineral element.

This painstaking work took a number of years to complete but at last Sachs was able to say that in all the many cases he had tried, successful growth could be produced in a solution containing a trace of iron and the following salts in a concentration of 1 part in 2,000 ; potassium nitrate, calcium phosphate, magnesium

sulphate, and calcium sulphate. It would seem that the following substances are necessary for plant growth : potassium, nitrogen, calcium, phosphorus, magnesium, sulphur, and iron. In addition to these of course one must add hydrogen which is obtained from water, oxygen, also a constituent of water and available from the air, and carbon, from the carbon dioxide of the atmosphere.

The other major elements found in plants, such as chlorine, sodium and silicon are not essential.

At last there was some precise information as to the essential elements taken in by the roots of plants. But this was not all ; here was the foundation of a technique which in various modified forms is being used by plant physiologists all over the world today. It is interesting to note that the soilless growth of plants has been developed as a commercial proposition during the last 20 years especially in the cultivation of certain horticultural crops, and masquerades under the name of hydroponics.

Even before the time of Sachs agriculturists knew that a limiting factor in crop production was the supply of natural manure. Could the natural product be supplemented or even supplanted by other methods ? It was a problem in which the co-operation of the agriculturist working in the field was necessary. The first field experiments on the use of artificial fertilisers were initiated by the great chemist Liebig early in the last century. The experiments failed because at that time not enough was known about the plants' requirements. The minerals were presented in an insoluble form and were therefore unavailable to the plant, moreover no source of combined nitrogen was supplied. However the search went on and pioneered by Boussingault in France and by Lawes and Gilbert in England (at the now famous Rothamstead Experimental Station), there was laid down the foundation of field and plot technique for the testing of artificial fertilisers. Indeed Lawes himself patented the first process for the production of an artificial fertiliser in 1843, a compound of calcium and phosphorus which we now call "super-phosphate".

It must be noted that of the essential elements widely different quantities are required by the plant for healthy growth. Iron is needed in a very small amount and is, of course, normally found in adequate supply in most soils. The practical man is interested in those elements likely to be in short supply in the soil and in big demand by the plant. Laboratory and field technique coped with both these aspects and as a result of a vast amount of work the following facts became established :—

1. That most soils are deficient in nitrogen salts and that these are in big demand by the plant.
2. That other common deficiencies are phosphates, potash and calcium.
3. That the kind of chemical fertilisers used, and the amounts applied depend on the crop and on the climate ; and must be carefully worked out.

For most agricultural and horticultural crops this information is today common knowledge and is accepted without realising the amount of work that has been involved in its determination.

For artificial fertilisers to be of use, they must be both cheap and available in large quantity. The history of their development is closely linked with the utilisation of the waste products of industry and the development of economic methods of manufacturing nitrogen salts from the nitrogen present in the air. Thus we now find nitrogen supplied as ammonium sulphate, a bye-product of the gas works,

and calcium phosphate supplied as basic slag, a former waste product of the iron and steel industry, and so on. Potash salts occur as natural mineral deposits.

But to return to the field of pure as distinct from applied science : from the modern technique for the refinement and purification of chemicals, and the methods based fundamentally on Sachs' technique of water culture, it has been found that there are other elements essential to plant growth. They are necessary only in exceedingly minute amounts and are normally present in soils and, unless special precautions are taken, are present as impurities in ordinary chemicals. They are hence often referred to as trace elements or minor elements. Copper, zinc, boron, cobalt, molybdenum, manganese all come into this category and the list is still growing. Their absence may not only produce profound and undesirable changes in plant growth but in some cases may have bad effects on the animals that feed on such deficient plants.

The history of the development of artificial fertilisers is typical of many practices that today are commonplace. First comes the pure scientist or academic research worker, interested in a particular problem for itself alone. He may not be concerned with the possible practical application of his discoveries. This is followed by a phase in which the knowledge gained is used by others as a basis for research on some practical problem. When their work is completed, the practical details are made known to the public, and become embodied in that vast accumulation of skills and techniques wherewith men seek to control and exploit their natural environment.

The Aboriginal Remains of Trinidad and the West Indies

J. A. BULLBROOK

This commentary on the pre-European cultures of Trinidad and the neighbouring West Indies was first written for an exhibition organised by the Archaeological Section of the Historical Society of Trinidad and Tobago. It has now been revised and brought up to date, and we reprint it with kind permission of the Historical Society.—Ed.

INTRODUCTION

THE object of the work being done by the Archaeological Section of the Historical Society of Trinidad and Tobago is to supplement the very meagre accounts which have come down to us from the Spanish chroniclers concerning the first inhabitants of this island. This is being done by excavation of the many remains which these early people left behind them, and, although the remains are usually only their rubbish heaps, they were also their burial grounds, and are so rich in material that they

will, in time, afford us valuable evidence not only as to the habits of the aborigines but also concerning their racial and cultural affinities.

There are at least 30 similar sites in Trinidad, in various states of preservation, already known to the Society, and unquestionably others will be discovered. In fact nine of the present total have been found as the result of the Society's efforts. In view of what the Society is able to show as the result of four months excavation on a small scale on one site only it is obvious that there is a large field of research waiting. We speak of the one site, because that has been the most extensively studied by the Society and has afforded the richest rewards in material, both numerically and in variety of objects, but other sites have been investigated in so far as our funds would permit and none has failed to enlarge our knowledge. We have also made comparative study of material in other parts of the West Indies.

When Cristobal Colon discovered the Caribbean islands, he found most, though not all, inhabited. He was not a great navigator, like Magellan or Drake, though he does seem to have realised that the world is round. His voyages were entirely utilitarian. He was seeking a western and—as he believed—a shorter route to India and possibly the East Indies. The purpose was for trade, especially in sugar and spices—both luxuries in those days. He never realised that he had not reached his goal, and neither did the rest of the world for some time. Hence the islands were named the West Indies, and their inhabitants West Indians. From this arose the term Red Indian, for almost all the aboriginal inhabitants of the American continent. These terms are most unfortunate and are a nuisance to archaeologists and anthropologists. The best compromise we have been able to effect is to mass all the aboriginal inhabitants of the American continent and islands under the term Amerindians. Actually, these are of many different stocks, though there seems to be no question that, with the possible exception of the Esquimaux, they were all derived from Asia in the very distant past. This essay, however, must not attempt to detail the origin of all the aborigines of America. Actually this has not yet been done and probably very many years will pass before the problem is solved.

As regards Trinidad, the near mainland, and the West Indian islands, we are on safer ground. By the method of physical anthropology we know that the aborigines of Central America, Northern South America and the West Indies were, for the most part at least, of Mongoloid stock, which is to say that, at some time or other, their ancestors had migrated from Eastern Asia—by what route we do not know.

The skeleton of one of these Trinidad aborigines is to be seen in the Museum of the Royal Victoria Institute, lying flexed in earth matrix with mortuary offerings.

The Spanish discoverers and early colonisers left us very few records concerning the people they first met in Trinidad, and even those are not always reliable. On the other hand they have given us much more detail concerning the people they met in the other islands, particularly in the Greater Antilles. It is mainly from these records, and from the continuity of a similar early culture, from Trinidad, up through the Lesser Antilles to Puerto Rico and Hispaniola, that we are able to be reasonably definite as to the affinities, cultural and racial, of those aborigines who left the dominant remains in this island. This race was known then, and is still known in the Guayanas, as the Arawak. It still exists but not in Trinidad. They were apparently a short, muscular, but mild and inoffensive people, quite unlike the restive and warlike Caribs, as are their descendants on the mainland today,

There was a race of earlier "aborigines" (the word is beginning to lose its meaning) in the Greater Antilles which was termed the Cibonez. These were apparently in a far lower stage of development than the Arawaks who followed them and were in an early phase of stone-age culture, having no pottery, and their stone implements were, for the most part, merely roughly flaked. Whether their people even inhabited Trinidad is still uncertain, but recent research indicates the probability that they did so. This is a major problem for future research. The Caribs came after them and wiped them out of many islands, but apparently never succeeded in doing so here, though in Tobago they became dominant. In the light of present knowledge it is doubtful whether true Caribs ever settled in Trinidad, or sought to do so—unless brought as allies by the Spaniards. We know that that happened in other islands, but there seems to be scant record of it in Trinidad. However, there is one direct contemporary Spanish account, which seems reliable and denotes beyond question that the inhabitants of Trinidad first met by the Spanish explorers were very different from the warlike Caribs. It is impossible to quote this account in this short essay. The interested reader is referred to publication No. 556 of the Historical Society of Trinidad and Tobago, concerning one Juan Bono, a slave trader in Trinidad in 1510. The account was written by a bishop of San Domingo (Hispaniola) in 1552, in which island some of the slaves from Trinidad were sold. It follows that the people of Trinidad, of so-called "Carib" descent are miscalled.

LIVING CONDITIONS

HABITATIONS

These people lived in small communities, which we may term villages, but bearing in mind that 50 families or so probably constituted the largest, while most were almost certainly smaller, for economic reasons connected with food supply. These villages were of course within the forest and usually had a small clearance around them devoted to kitchen gardens. The earliest Spanish records mention such "gardens". They could never have been very large and must have resembled those seen in the Guayanas by the writer where less than an acre per family is "cleared" by the community. The "clearing" consists of felling the trees by fire and allowing them to lie and burn if and when they will. Nothing else is done, save to plant the crops between the fallen trunks.

The houses were well constructed, roughly circular huts, built, briefly, as follows: strong posts were driven into the earth four or five yards apart. Between these, canes were lashed with lianes. Transverse beams across the tops of the posts supported poles inclining together to form a high conical roof. These were slatted with cane and thatched with palm leaves. The huts were rain and draught proof, earthen floored and each housed a family who slept—and usually died—in hammocks. The people seem to have had rudimentary knowledge of hygiene, for—as the Spaniards record and we have been able to confirm—their villages were invariably built in places exposed to the wind, and if possible on high ground. The Spaniards assert that this was done to avoid mosquitoes and sandflies. The villages were also usually very near the sea, though a few are known several miles inland. These latter are invariably on high ground—compared with the surrounding terrain.

These people had another hygienic habit, which is proving invaluable to the archaeologist. They did not throw their domestic rubbish into the village street,

or just into their own or neighbour's back yard. They had a communal dump outside the village and this was usually either to leeward of or down slope from the houses, or both. Into this dump the people threw everything unwanted, from food remains to broken pots and tools. These communal rubbish dumps are termed "middens" or "kitchen-middens", from a Danish word denoting exactly the same type of rubbish heaps found around the shores of Denmark, which were the first of their kind to be described. It is a curious fact, however, that—exactly as in Denmark—we often find in the West Indian middens articles not broken (or at least not contemporaneously so) and which we certainly should not consider unwanted. This will be discussed later, when we come to deal with the fact that the middens were not merely rubbish heaps, but were also burial grounds.

Other factors in the living conditions of these people are better mentioned in the summary of what we have learned about them from their remains, which the Society has now commenced properly to examine.

FOOD

Although, as indicated above, the aborigines probably cultivated a few crops, they were essentially flesh eaters. It is this fact which has led to the discovery of most of the middens. Their staple diet was shell fish (mollusca), but in addition they ate fish in abundance, together with reptiles, birds and mammals. The order of importance seems to be shell fish ; fish ; mammals ; reptiles ; birds.

Of these, shell fish predominate in enormous proportion — thousands to one. There are literally thousands of millions of molluscan shells in most of the middens. In "rich" middens, such as those of Palo Seco and Erin, we find as many as 8,000 individual shell fish per cubic foot. In animals like "chip-chip"¹, this would of course mean 16,000 shells. This is not an estimate, but actual count. It is not therefore surprising, that since shells form such a colossal proportion of the middens, these are usually discovered by a collection of shells, preponderantly of only one or two species, in situations where they would not be expected or could not have been accumulated by natural agencies. In addition to this unusual assemblage, the soil matrix in which it is to be seen is most often so dark as to deserve the term black when at all wet. This is due to a chemical reaction between the calcium carbonate of the shells and the organic matter in the soil, which cannot be discussed in a short essay. It is for these reasons that the Society is asking every reader of this essay to report to its secretary or president any assemblage of sea shells or black soil, or both, which appears to be unusual in position or surroundings.

The predominant shells seen in most of the shell middens are either "chip-chip" or "wacoo"², but this is not a universal rule, though it does seem to be so in those middens nearest to the sea. In the inland middens larger shells tend to predominate, such as oysters, or even conchs.

Even at the same site, however, the dominant shell fish and, still more, the actual numbers of total shell fish may vary enormously in different portions of the midden. This may indicate one or both of two things. Either two different occupations of the same site, with a time interval between, or fluctuations in food provenance in the same area. At the Palo Seco midden, the author has shown that the former was the case ; at the Erin midden, the former is certainly possible, but the writer does not consider it proved. We hope that further excavation will settle

the point. It is not unimportant in regard to the former — and even present — ecology of the coastal fauna of the island. Altogether there are known 26 species of local shell fish and land snails used for food.

Next in importance among the food remains are the bones of vertebrate animals. The proportion of these to the shells is extremely small. Nevertheless, the actual number found is very large and must represent a considerable consumption per capita, even allowing for the length of time involved in accumulation. We cannot here detail species, but there are a few factors of interest which should be mentioned. By far the greatest proportion of vertebrates represented are fishes, including those of the deep sea. Next in proportion are mammals, which far outnumber reptiles and birds—which occur in that order. Bird bones are in fact very scarce. These proportions are of great interest and may have many important implications, which, however, cannot be considered here. They are interesting also in relation to the pottery figurines found in the middens where the proportions are of the same general order, but birds and reptiles tend to be reversed, while recognisable fishes are scarcely ever found.

Perhaps the most important fact which has arisen from our analysis of these bones is the discovery of a deer, obviously eaten by the aborigines at Erin, which is not only extinct, but hitherto entirely unknown in Trinidad, even as a fossil. Such discoveries justify work.

As regards plant foods we are on far less sure ground, for the obvious reason that no remains of such could possibly survive in the middens. Apart from the Spanish accounts, our evidence concerning this is, therefore, entirely inferential. Again, space is too short for detail. Many of the shapes of the pottery vessels found indicate the use of vegetable food, but they afford only a vague inference. Since 1919, at least, we have been seeking something among the pottery remains which could give more tangible evidence. At last we have found it. In the Erin midden, we have found certain sherds sufficiently large and in sufficient quantity to show that they could have been nothing else but griddles. Their importance will be seen shortly.

We know enough of the cultivated food plants of Trinidad to be fairly certain that, with the exception of the two varieties of cassava, none of them is indigenous. The same applies to the cultivated fruits—not even cacao belongs to Trinidad. With the exception, therefore, of the not too palatable wild fruits of the forest, the aboriginal Trinidadian was confined to the cassavas for his vegetable food. This still applies to the interior parts of Northern South America. In South Venezuela, the writer has had to live for months on nothing but cassava and sun-dried flesh. Cassava is of two kinds, the "sweet" and the poisonous. Of these the poisonous is certainly far the more common, except in specialised cultivation. In the interior Guyanas it is still the staple food. The reason for this is that (freed from poison) it affords a nourishing, though tasteless bread, while the expressed poisonous juice, after fermentation, becomes non-poisonous and affords a flavouring preservative agent to the "pepper-pot". This pepper pot, of which most Trinidadians have heard, if not tasted, is nothing but the method devised by the aboriginal South American Indians to conserve the food they have got by hunting or fishing for future use, since it must so often happen that the bag of the hunter or the creel of the fisher contains far more than he and his family can use at once, while at other times both may be empty. The pepper-pot is one of the

world's most ingenious food storage methods and could only have been devised as it was by a people whose plant food was scarce and animal food erratic. For it are needed large and deep earthenware vessels. Into these is put all the animal food of whatever kind, from chip-chip to monkey, covered with water and brought to the boil. To this is added pepper (capsicum) and cassareep to taste. Cassareep is really the expressed poisonous juice of the cassava, after it has been boiled and allowed to ferment in the sun, by which process all poison is eliminated. It is obtained as follows: the raw cassava is rubbed on a grater and so converted into a coarse flour, which is collected in a vessel below. This flour is then placed in a tube of basket work, which can be greatly constricted by extending its length. This is usually done by hanging it to a roof beam while two or more persons sit on a rod placed through a loop at its lower extremity. The flour remaining in the basket is non-poisonous. It has, however, one peculiarity. It cannot be made into loaves. It can only be made eatable by baking on a griddle in thin "pan-cakes", and this is its entire method of use throughout the Guayanas and West Indies. Hence we return to the importance of finding such griddles in the middens. It is probable then, on all counts, that the aborigines did cultivate, but only cultivated cassava, and of course pepper, for food purposes.

Before we leave the food question, there is one point of more than usual interest to be mentioned. Rickets and dental decay were almost unknown among the West Indian and American aborigines, so that it is obvious that they must have had ample supply of the bone-forming vitamin. This strongly suggests that they ate at least some proportion of their food raw—probably some internal parts of the fish. It is known, for example, that even lions most frequently eat the liver of their prey first. That this immunity among the Amerindians is not a matter of heredity was proved to the writer, when he lived in an Indian reservation in British Guayana, in which scarcely an Indian had two sound teeth. They were eating "modern" food.

1 "Chip-chip" is *Donax* (usually *striatus*).

2 "Wacoo" is *Trigona* Sp.

[To be concluded in our next issue]

Social Science Research

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THE ASQUITH COMMISSION ON HIGHER EDUCATION IN THE COLONIES, in considering the range of studies appropriate to the Colonial Universities, states that history, geography, and the social sciences had special appropriateness in colonial regions, as forming an essential background to much of the work that the students would be undertaking in after life, and an essential part of the educational framework (Cmd. 6647, pages 16 and 17). The Commission, however, pointed out that much

research and publication would still be necessary before adequate literature on local aspects of history, geography, and social science would be available for undergraduate training. They therefore regarded as most important the establishment of an institution mainly devoted to research in these fields, linked with a university in which there was no inappropriate distinction between teachers and research workers but sufficiently staffed to ensure that the proper claim of teaching would not impede investigation.

The West Indies Committee of the Commission (Ref. Cmd. 6654, para. 136-8) emphasised the importance of research in the social sciences, stating their belief that "the West Indies provide abundant opportunity for economic historical and sociological research in the widest sense. The territories show great variety in their political and racial situations and histories, while they sometimes present the same general problems with interesting local differences". They found it "difficult to resist the temptation to enlarge upon the intellectual adventures that are waiting in this field".

Following on the recommendations of the Higher Education Commission and its committee, plans were worked out by the Colonial Social Science Research Council and the result is that the Institute of Social and Economic Research of the West Indies University College has been brought into being. The British Government has agreed to finance, by a grant for five years in the first instance, the establishment of the Institute as an integral part of the University College of the West Indies. A quite considerable sum is involved and the Caribbean has cause to be appreciative, but it is probable that the form of appreciation most acceptable to the United Kingdom Government is that the grant proves in time to be an investment. If the Institute by its endeavours contributes to the social and economic betterment of the community, a contribution will be made to the achievement of a higher standard of life. Raised standards in one group of territories in particular cannot but affect the standards in the Commonwealth in general. Such inter-relationships give to social and economic research, with the possible effects on education and planning, its significance.

The function of the Institute, primarily, is to endeavour by its efforts to integrate research in the social sciences in the Caribbean. To perform this service effectively, the Institute has to beware of planning its programme in an ivory tower, and it would be unfortunate if the programme adopted did not attempt to make a realistic blending of academic considerations with the practicalities of the problems pressing for answer in the Caribbean.

While the headquarters of the Research Institute will be with the University College in Jamaica, where we hope the building will be erected shortly, the staff will be decentralised. We intend that research activities in different projects will be undertaken in as many of the colonies as funds and such considerations will permit, and we hope that work will at all times be planned with the counsel of the Governments of the several colonies. The Institute will undertake *ad hoc* investigations into certain day to day problems. But unlike a Government economics department, which has constantly to search for answers to topical problems, the Institute must undertake long range and fundamental research if it is to make a full contribution to the reputation and standing of the University. A proper balance between these two types of research will be based on certain general directions, and will call for nice decisions.

The recently published advertisements for Research Fellows and Research Assistants invited applications from persons with good honours qualifications in economics, sociology or other allied social science and with some experience in research. Those who are appointed to these posts will form the nucleus or central core of the Institute's research staff. In addition to this central group of workers, the Institute hopes to have a broadening and deepening influence on research in the area by enlisting the collaboration of those workers in Government services and other institutions in the Caribbean who are already occupied in the social sciences. We hope also to secure collaboration from research workers financed from independent sources, and thus to overcome some of the difficulties created by the dollar shortage and to secure the association of United States workers in the Institute's programme, whose contribution to our work will be very desirable.

The Institute may be said to have been brought into existence formally in September, 1948, and I was appointed director in the middle of that month, and was asked to proceed at once to the United Kingdom for consultations with the Colonial Social Science Research Council, one of those anonymous organisations performing constructively a volume of work that is recognised by few apart from those who know the inner workings. My visit became as effectively useful to me as it did mainly through the attitude of members of this Council. Discussions took place with representatives at the Colonial Office, the Economic Research Committee, with workers in the social sciences at London University and in several other research organisations. From London I went on a tour of research institutions which included universities at Cambridge, Oxford, Manchester, Liverpool, St. Andrews, Edinburgh and I took the opportunity to become acquainted with the work in Birmingham. I also visited the Indisch Instituut in Holland to see something of the research organisations set up by the Netherlands Government to deal with social problems in overseas territories.

The Colonial Office agreed that I should return to Jamaica *via* Canada and the United States. The mission was undertaken, because the contribution of the new Institute will be conditioned largely by the relationships which can be established with workers and administrators in the older organisations on both sides of the Atlantic. As before, my assignment was to visit universities and foundations likely to be interested in research, to learn from them by discussion, and also to make the point that the University College of the West Indies would be able to offer to organisations abroad, with an interest in research, facilities for collaboration which did not exist before.

In Canada, McGill University was my headquarters. In the New York area the Carnegie Corporation kindly placed a room at my disposal where meetings and introductions could be arranged. Apart from foundations and similar organisations, I went to the Universities of Columbia, Harvard, and Cornell. In Washington, the Colonial Attaché at the British Embassy arranged, among other things, a group discussion with officers from the State Department concerned in research. While there I visited Howard University. From Washington, I went to Chicago and Evanston, where I met some of that well-known group of workers at the University of Chicago and at Northwestern University. From Chicago I went South, stopping off at Baton Rouge and meeting persons from Louisiana State University and from Southern University. From New Orleans, I left for Jamaica in January and arrived in time to report to the Principal and the Council just before its deliberations ended.

This progress report of the relatively short life of the Research Institute has included little reference to definite lines of study. Relatively full and comprehensive lists of problems which should receive priority for investigation have been drawn up by individuals and organisations in the Caribbean, one of the best known enumerations being that made at the second session of the West Indian Conference held in St. Thomas in 1946. It may, therefore, be well for me to conclude with an extract from a broadcast which I made shortly after returning to Jamaica. "It may be said that the chief purpose of the Institute is to undertake studies which can in general be of service in relation to the area's social and economic problems and which can, in particular, help to provide literature 'adequate in quantity and amount for undergraduate training'. Let me be a little more specific in regard to types of projects which may perhaps be considered to have a priority for our attention. Recently when in England this kind of thing was suggested to me. It was said : You in the Caribbean have a population increasing, increasing as it is especially in many comparable areas of the world. You have had, recently, dramatic control of malaria by the use of insecticides on the vector mosquito. Surely the control of malaria by the use of these insecticides must be significant. In the past malaria infected your children, your children became unhealthy and a relatively large number died. Malaria infected your mothers and therefore the mothers gave birth to perhaps not quite so healthy children. Now if you put a check on malaria, there may well be a bearing on your population growth. What will be the implications of such potential increase of your population ? It is a matter for study by your medical men but it is also a matter for study by the sociologist and by the economist. This is the kind of problem that affects us and which teams of workers with differing approaches and backgrounds can tackle and in which the Research Institute can play a part.

Population is one of our urgent problems in the Caribbean. The population, in most units, is pressing on the land. What can we do about it ? One of the things which we can suggest is that some of our people migrate, and here we shall not tackle the difficult question of destination of our emigrants. Puerto Rico has had some experience with the migration of its population. Some of its emigrants have gone to the United States, and the Governor of the island in a recent address pointed out that although migration had occurred, and though it was a very desirable thing in itself, the lines along which migration had taken place were in many ways most undesirable from the point of view of the Puerto Rican and his relationship with his new surroundings. The emigrants had gone to the United States, found themselves massed and crowded together under circumstances in which the community effect on themselves and on the people among whom they now lived was not good. Similar problems are of concern to other parts of the West Indies. For instance Jamaica, Barbados are on the look-out for migration opportunities ; the lines along which it should take place is a matter for study. Let us agree, therefore, that one course open is migration. If that can be secured, it is good. As a complementary aid we have to consider secondary industries. These provide another means of absorbing some of our excess population. How will more industries come into being in the Caribbean ? How will they be established ? What planning will we do for them ? Clearly your research worker in the social sciences—who has given study to the history and evolution of the growth of industries, to the factors found to encourage and the factors found to

obstruct their expansion—joining forces with those other people like the engineer and the chemist who are already giving thought to the subject, can, and I believe will, make a contribution to our life in the community”.

Extra Mural Activities

RESIDENT TUTORS' NOTES

The Department of Extra Mural Studies is in its infancy. Only in Jamaica has any substantial development taken place so far, and for that reason, Mrs. Cumper's account of the past year's work there is given prominence. For the rest, the Resident Tutors' notes show that something is beginning to stir elsewhere.—Ed.

JAMAICA

It is stimulating to be doing educational work in Jamaica in these days, particularly when it is of the type of adult education which is undertaken by the Extra Mural Department of the University College of the West Indies. To work daily with groups of adults who come together voluntarily to find out about things which interest them is to get caught up in an unexpectedly strong wave of enthusiasm for knowledge, an enthusiasm which does not need the stimulus of diplomas and certificates. Many things account for this widespread spirit of enquiry. Over the past 12 years, labour disputes, riots, the focus of attention on the unhealthy state of the country, political ambitions, and lastly, the establishment of the University College of the West Indies in our midst, have all had their effect.

The first indication of the strength of this enthusiasm came with the experimental classes organised in September, 1947, by Mr. P. M. Sherlock, Director of Extra Mural Studies in the University College of the West Indies. Classes were set up in three areas of Jamaica: Kingston, Spanish Town and Port Antonio. In each of these, interest in adult education had already led groups of people to organise lectures and other educational activities. Response to the invitation to join the classes was immediate, and in some cases overwhelming. A Psychology Class in Kingston enrolled 300 students, a Spanish class over 100.

The success of these classes awakened

interest on all sides in this new educational venture. By the middle of August, 1948, requests were coming in from all over the island, from interested societies and individuals, who wished to share in the programme of work which was to begin in September. The Y.W.C.A., the Jamaica Agricultural Society, branches of the Jamaica Union of Teachers and of the Co-operative Society, schools and welfare organisations were among those who asked for classes to be formed or offered accommodation for them. Classes were arranged with these groups and members of the public were invited to attend.

Throughout the organisation of the work, stress has been laid on the community nature of the undertaking. All literate persons who are interested are invited to join the classes, and the class, when formed, is encouraged to look after its local organisation and publicity, and to take some responsibility for helping to keep interest alive. In a few areas, like Montego Bay, an active, helpful group of people have taken on responsibility in these directions, and have immeasurably helped to lessen the organisational work of the department. In other areas response to this side of the work is slower in coming, especially where a community feeling is noticeably lacking. Continued encouragement, however, may result in the discovery of some energetic leaders. Some of the apathy which held Jamaica in its grip for so long is manifested still in the reluctance of many able per-

sons to undertake this kind of active leadership.

Twenty-six classes were started in September, 1948: 17 in Kingston and St. Andrew, and nine in other parts of the country. Most of the teaching work was done by class tutors, generally secondary school teachers and civil servants, who were aware of the demand, recognised the need for instruction, and were willing to give their services in return for inadequate compensation, or sometimes freely.

As indicated above, the subjects for study were discussed with groups. The most popular subjects were Spanish, Caribbean History, Economics and Psychology. The shift from a preoccupation with Britain and Europe in general, which for long filled the horizon of most of the middle classes, to an interest in and awareness of the West Indies as an entity with a separate existence and destiny, was most marked in the discussions which always prefaced the choice of subject. The war had helped businessmen and holiday makers to realise that we have near and influential neighbours in the Spanish-speaking countries around us, and they were anxious to be able to make full use of the amenities they offered. That the future of Jamaica was involved in the future of the Caribbean was generally assumed, and many agreed that we had failed to learn of or recognise our opportunities in the past largely because local education had failed to acquaint Jamaicans sufficiently with their environment, and because there was no channel through which accurate unbiased information on a variety of subjects of interest could be made widely known.

The interest in Economics is readily understood when it is realised that the imminent bankruptcy of the country is a daily topic in the newspapers, and the rising cost of living coupled with a grave problem of unemployment causes general concern.

The current interest in Psychology is very strong but only two classes in this subject were begun. The difficulties of teaching it were complicated by the lack of really relevant books and information.

Biology was included in the list of subjects on our programme. A special demand for this subject arose from those elementary school teachers who are now required to teach the subject but have themselves never been adequately taught it. We plan

to overcome the difficulty created by the lack of equipment by supplementing extra mural classes with summer schools at the University College.

Jamaica is still primarily an agricultural country, oppressed by a land settlement scheme which is costly and inefficient, and beset by problems of soil erosion, irrigation and plant disease. Ignorance is the greatest enemy to progress, and much useful educational work on the practical problems of farming has been done by the Jamaica Agricultural Society. But this alone is not sufficient: a major change in approach is necessary if disaster is to be avoided, and for this there must be in existence a body of public opinion, well-informed of the problems and possibilities of agriculture, and able to see them in the framework of the whole life of the island. It was with this in mind that a course in Agricultural Economics was arranged with the Jamaica Association of Professional Agriculturists. It attracted great attention in a semi-agricultural suburb of Kingston, and many requests for a similar course have been received from various parts of the island. This seems to be a subject to the study of which we could make a valuable contribution by collecting, printing and distributing study material.

The collection of material is one of the most important parts of our work at present. If our teaching is to have point, it must relate to the knowledge and experience of the students, and they must be helped to obtain relevant, accurate and unbiased information. In the study of the social sciences we have found that books written in and for the American or European environment have proved useful, but not really valuable. It will be necessary to obtain and make available accurate and relevant information to supplement these texts until some really suitable books can be obtained. Material to fill this need is already in course of preparation, and the first pamphlet will soon be off the press.

This objective approach to information seems to me the most valuable contribution to adult education which can be made through the Extra Mural Department of a University. Therefore much emphasis has been placed on the training of tutors, as few have had experience of teaching adults, and we must be sure that a high standard of objectivity in teaching is maintained. Also, with this end in view we had

hoped to organise the classes as tutorials with the emphasis on class participation and discussion, but in many cases too many students enrolled to make this a feasible way of dealing with the class. The 26 classes attracted a total registration of about 1,200 persons from many walks of life and age groups. These figures by no means indicate the surprising extent of the demand reaching us from all sections of the community. Perhaps some of the manifest enthusiasm is due to novelty. At all events, we are restricted by the number of capable tutors available. A further year will enable us to improve the supply of tutors and test the seriousness of this demand.

GLORIA CUMPER
Resident Tutor, Jamaica

WINDWARD ISLANDS

Mr. B. H. Easter, formerly Director of Education in Jamaica, writes that he arrived in Castries, St. Lucia, two days before Christmas, 1948, to take up work as Resident Tutor for the Windward Islands, just 25 years after the first time he landed in the island. St. Lucia is to be his provisional headquarters, with Dominica lying to the North, and St. Vincent, Grenada, and the Grenadines to the South. Communications are difficult, but will improve when the projected air services come into operation. Amongst other difficulties, Castries was almost entirely destroyed by fire last year, and the whole Carnegie Library lost. The department has so far succeeded in collecting a nucleus library of its own, of 400 books.

A provisional advisory committee was set up, and on 22nd February an enthusiastic meeting was held, with the Administrator in the chair, at which the work of the Extra Mural Department was fully explained.

It has been decided to begin with some short introductory courses during the first session—April to July. Ten courses have been offered and students have already begun to enrol. The subjects include—English (spoken and written), English and French drama, social history, economics, art, musical appreciation, building construction, current affairs and government.

The Resident Tutor was able to spend a

week in St. Vincent in January, travelling by schooner with an inter-island football team. He contacted possible members of an advisory committee, potential tutors and students, held a meeting at the Public Library at which the acting Administrator presided. In March he plans to spend a week or so in Grenada where a training course for tutors has already been held and where a good deal of interest has been shown. He is to go to Dominica as soon as the Administrator has returned from England. Professor Peers, Director of Adult Education at Nottingham University is to pay short visits to Grenada and St. Lucia in March.

Mr. Easter writes that while, in the West Indies, initial enthusiasm is no sure guide to a sustained interest, the keenness so far manifest gives reasonable assurance of worthwhile work being done in the Windward Islands.

LEEWARD ISLANDS

Mr. F. W. Case set up his office in St. John's, Antigua, on 1st January this year, and has been concentrating his attention on that island to date. Four experimental courses have been arranged, two in choral music, one in economics, and one in psychology, and a special two-week training course for tutors was held at the end of January. This course met in the evenings, and consisted of discussions introduced by the Resident Tutor on the problems of adult education, practice talks by each of the members of the course in turn, and two "specialist" talks, one on "Visual Aids" and one on "Libraries and other facilities". The courses ended with an Open Forum, at which its value was discussed by all who had taken part.

Writing about this course, the Resident Tutor speaks highly of the enthusiasm of the potential tutors present, but draws attention to their apparent unwillingness to make effective criticisms of one another's practice-talks.

The Resident Tutor insisted very strongly that tutors conducting classes in the name of the University College should endeavour to approach their subject with as little bias and as much objectivity as possible, and that they should preserve a high degree of moral and intellectual integrity throughout.

Mr. Case also reports that the "official" members of his Advisory Committee have already met.

BARBADOS

No appointment has yet been announced for Barbados. However, a course for tutors was run by Mrs. Barber there during the summer, and a considerable number of people are eagerly awaiting the arrival of a Resident Tutor.

A Resident Tutor with many years experience of adult education has been seconded from service with the Cambridge University Board of Extra Mural Studies for a period of one year. He is Mr. Douglas Smith, graduate of Emmanuel College Cambridge, and holds an Honours Degree in History and English. He is expected in Barbados shortly.

BRITISH HONDURAS

Shortly after the arrival of the Resident Tutor in mid-February the University College and the British Council in concert sent out Professor Peers, O.B.E., to conduct a week of publicity for the Extra Mural Department. There was little enough time for preparation but nevertheless much interest — friendly and otherwise — was aroused. A full programme included a public lecture on adult education, a radio talk on the work of the University College, a talk on books in the Belize Library and a specimen Extra Mural Class. A considerable number of personal contacts were also made, the influence of which may not be apparent for some time.

As yet the work is confined to Belize; lack of roads and other transport facilities puts difficulties in the way of further expansion. But there is a strong possibility that scope will present itself for occasional projects in the districts in a few months' time.

Classes in Belize are to begin very soon (nearly 100 applications have been received) and it seems that English language will be most popular. An art exhibition has been held in the library and others are projected; the Resident Tutor is writing book

reviews for the local press, and intends to assist the Director of Education with a teachers' summer school later in the year. Relations with the Education Department are cordial and it is anticipated that this association will prove fruitful for the future of adult education in the Colony.

BRITISH GUIANA

Dr. J. A. Waites arrived in British Guiana at the end of November, 1948, and has been much handicapped by sickness since then. He has already broadcast on the work of the University there, and arranged two public lectures, one by Dr. J. A. Venn, Principal of Queen's College, Cambridge, on "Economics and Science in Agriculture", and one by Mr. Richard Sudell, member of the Sugar Commission and a Sub-Editor of the *Daily Herald*, on "Modern Journalism". Arrangements are being made for a short training course for Class Tutors here in June or July, to be taken by Mrs. R. V. Coleman, staff tutor from Oxford University Extra Mural Delegacy.

TRINIDAD

Mr. A. C. Pearce arrived in Trinidad just before Christmas, 1948. After spending several weeks in Port-of-Spain, San Fernando and Tobago, he set up office in his house at St. Joseph. He has been spending much of his time reporting on the progress of the University College to interested groups, and explaining the facilities which the Extra Mural Department proposes to offer. A training course for tutors was held in Port-of-Spain last August by Mrs. Barbara Barber, and Mr. Pearce has arranged further courses to be held in April and May in Tobago and San Fernando. He has also given a series of three broadcast talks over Radio Trinidad on the "University College and the Extra Mural Department". Between now and September a number of experimental classes are to be held. The interest shown in the University College has been very remarkable, and the press most helpful.

Reviews

THE LITTLE CARIB DANCE GROUP (Trinidad).

We West Indians, facing the task of building a nation, must now set about excavating, sifting, refining, taking stock, developing and expanding our cultural heritage. Beryl McBurnie and her Little Carib dance group are already doing this. The Little Carib is an unpretentious building squeezed into a backyard in suburban Port-of-Spain. It has a stage wedge-wise in one corner and seating accommodation, when there are seats, for about 250 persons. The Little Carib is Beryl McBurnie's concrete expression of her belief in an indigenous West Indian culture. Trinidad had nearly 50 cinemas but no theatre; miscellaneous meeting halls for periodical art shows, exhibitions, concerts, etc., but no cultural institute—apart from the headquarters of the British Council. To meet a cultural need and to present the dance and its attendant music based on West Indian and Latin American traditions and folklore, which she has made the subjects of special study, Beryl McBurnie, with the help of a few well wishers and with great enthusiasm and perseverance on her own part, built the Little Carib.

I still have a vivid impression of the first dance recital "A Trip through the Tropics" Beryl McBurnie presented in Port-of-Spain in 1940 soon after her return from the United States where she had already earned a name for herself as a dancer. The programme was a composite one ranging from classical items such as an abstract fantasy to music by Wagner, Beethoven, Bach, and Mendelssohn through "Impressions of New York" to creative dances of the West Indies featuring a shango, Cuban conga, Haitian drama,

Brazilian bambu bambu and island fancies of Dominica, Martinique and Guadeloupe. The dancers, who were all amateurs except Beryl McBurnie, were not completely at home in some of the classical numbers, e.g., the "Potter's Dream" to Tchaikovsky's Andante Cantabile in semi-ballet style, but the other items were danced with an ease, spontaneity and freshness which amply reflected the artistry and creativeness of Beryl McBurnie and the colour and atmosphere of the West Indian scene. Watching the simple patterning and now elemental, now delicate limb movements in some of the dances to swaying and pulsating Afro-Latin American rhythms one felt that here was someone who had succeeded in clothing the West Indian scene in an art form in keeping with the spirit of the place, and the result was both pleasing and hopeful for the future.

One item, "From Minuet to Swing", summarised Beryl McBurnie's sense of history and consciousness of cultural traditions, features of her work which were to be reflected in later recitals. Miss McBurnie went to the United States soon afterwards to pursue further training at Colombia University and studied under Martha Graham and Elsa Findlay. Then in 1946 in a search for fresh material she visited Brazil, British Guiana, Cayenne and Surinam and filled a sketch book with dance forms, costumes, songs, folk tales, music, &c., of those regions. The Little Carib became an idea. During the carnival of that year a show was presented in the barest of structures on the present site and in November, 1948, the Little Carib was formally opened by Paul Robeson, who was in Trinidad at the time, with "Talking Drums". Introducing the pro-

gramme with a lecture on the influences of Trinidad's various cultural strains on rhythm and typical West Indian movements and highlighting certain items with an accompanying "voice" one enjoyed the haunting Brazilian "Terra Seca", delightful market scene "Ah Passin", witty aged East Indian's dream of young love "Massala". Paul Robeson was impressed and the audience was enthusiastic. For the 1949 carnival "Jour Ouvert" the audience was introduced to dances based on scenes from carnival in Spain, New Orleans, Martinique, Brazil, Cuba and Trinidad's own steel band.

I have said that the audiences of the Little Carib have been enthusiastic. This is true. It has many well-wishers. Others have described the Little Carib as an accomplishment; as a symbol of self discovery and of the creative ferment stirring among West Indians; as a movement in the direction of a truly indigenous West Indian culture. I hope it is all these things. Much of its future, however, will depend on the growth of a West Indian culture generally in art forms, and on the support of a public, consciously fostering such a culture.—E.M.

DEMOCRACY AND EMPIRE IN THE CARIBBEAN. By Paul Blanshard. (The Macmillan Company, New York, 1947).

Occasional errors of fact in the most authoritative of books are to be readily forgiven. Errors of judgment, hasty conclusions from selected premises, arguments from the particular to the general; these make harder calls upon our charity.

Thus, in Paul Blanshard's *Democracy and Empire in the Caribbean*, we can brush aside the geographical slip that places Georgetown in Grenada (p. 157), or the historical inaccuracy that gives Barbados to the French in some dim and mythical past (p. 245). But the over-simplification of the colonial problem into a question of racial discrimination and wicked imperial exploitation is an error of judgment. The refusal to acknowledge the aspects of paternalism, however few, in any but American overlordship is to ignore patent economic factors which might upset pre-

conceived conclusions. The rapid proofs of sweeping theorems from slender data are illogical and always suspicious.

Mr. Blanshard is particularly unfortunate in the opening sentence of his first chapter. "There is some irony", he writes, "in the fact that the United States sent millions of troops to distant parts of the world to fight for freedom in two wars while nearly 6,000,000 people were living in America's Caribbean backyard without self-government". There is even greater irony, the reader will immediately reflect, that there should have been equally politically repressed millions camping uncomfortably on America's front porch—the one with the Southern exposure.

Mr. Blanshard's greatest error lies in his presentation of the Caribbean problem almost entirely as a clash of colours. Undoubtedly, colour prejudice is an evil from which these islands regrettably suffer. But it is not the root of all evil, although there are many of my friends who will see it his way. I tell him, as I am forever telling them, this contention stems from argument from secondary rather than from primary causes. It results in a form of inverse colour-blindness.

At the time of the emancipation, practically all the land of the West Indies was in the hands of the whites. This remains the case, for land is, perhaps, the most difficult form of wealth to redistribute. It is not surprising that the white and rich, white and landlord, white and oppressor, became synonymous. Conversely, black and poor, black and labourer, black and uneducated, became interchangeable in the minds of ignorant whites.

This, then, is a primary cause of discontent in these islands: that there has been insufficient opportunity for the emancipated slaves or their descendants to become land owners. There has been no real land resettlement in practically any of the British territories. Economic equality achieved, colour differentiations quickly disappear, giving way to the more acceptable social distinctions of economic status, education and culture. My guinea pig in this connection is Grenada, which, of all islands, seems to have evolved best.

Even worse, of course, is the fact that so much of the land is not owned in the West Indies at all. This has meant that the handsome profits of the good years have gone into the pockets of English

shareholders, to be invested elsewhere and to be forever outside the reach of Caribbean income taxes and death duties. And, in the lean times, none of these profits are ploughed back in to buffer the shock, which is met by a policy of expenditure cuts and labour lay-offs. This, I think, more than anything else, explains the reasonably stable economy of potentially poor Barbados, with its less than five per cent. absentee ownership, as against the unbelievably pauperised condition of islands like St. Kitts, where all the sugar profits go to shareholders in England.

Mr. Blanshard would have served us better had he included in his Propositions one recommending that the example of the Land Authority in Puerto Rico be followed elsewhere. Such a concrete proposal would commend itself far more readily to patriotic West Indians than do the nine platitudinous generalities with which he ends his book, and to one of which, at least, a far better man than I has given the answer. His Proposition Six states: "The Caribbean Colonies and all colonies should be included within the scope of the Trusteeship Council of the United Nations, and this Council should have complete power to investigate thoroughly and to report upon all aspects of colonial administration". For reply refer; Grantley Adams.

In conclusion, West Indians will fully endorse his closing "conditional prophecy"—The Caribbean peoples will remain loyal to the Western democracies", and reply to his "unequivocal special pleading—the Western democracies must be worthy of their allegiance", that these metropolitan powers have not done as badly as he seeks to make out.—E.L.C.

NEW DAY, A Novel of Jamaica. By V. S. Reid. (Knopf, New York, \$3.00). Reading Vic Reid's novel for the first time was a memorable experience. The past, our past, came to life and the dead hundreds were beside me; on my face the breath of those who have passed; and my eyes made fours with the eyes of those men and women who yesterday were warm flesh and blood.

Through the evening darkness came the voices of the singing folk, of the folk

singing "Onward Christian Soldiers". It was 1944 and the new constitution would bring in a new day. But tonight, old John Campbell listens and the years melt away and these are Deacon Bogle's men singing "Break down the walls o' Jericho".

So with the boy John Campbell we live through the Morant Bay rising of 1865; know Davie and Naomie and the father John Campbell as if we had been with them in the flesh; see Lucille Dubois and Custos at the door of the parish church; hear Pastor Humphrey preach in the crowded church while Bogle's men at the window groan their disapproval. These things I lived through. I was a part of the mob which faced the custos, and heard the cowhorns talk of wartime and the hunt.

"Lived through"—those are the right words, for Victor Reid has brought the past to life and made us brethren with John Campbell and the others. These people are alive, full of the hopes and frustrations that we know, people whose courage helped to make the new day. Their story is told with conviction and compelling power.

And Victor Reid has done more, much more. The Morant Bay rising was a local incident. It has meaning for us who belong to the West Indies, but it remains local, small in scale, limited in scope. The story of this rising might easily have been limited in appeal and parochial in spirit. Not so with *New Day*. This local incident has universal validity and meaning, because the forces that meet in conflict are universal forces, and because the qualities revealed in that conflict are not those of a class or of a race but of humanity.

Yet there is no sacrifice of the local or individual. These peasant people seeking justice are at one and the same time typical people of their parish and representative of man's age-long protest against oppression.

The landscape is that of Jamaica. At the very beginning of the story the scents that come to us are those of the shrubs on the mountains: "cerôsee, mint, mountain jasmine, ma raqui, there are peahba and sweet cedars". There are the occupations of daily life, the making of starch from the cassava, and a boy eating number eleven mangoes in the way they should be eaten. Description and narrative run together, and the writer finds his imagery in the sights and sounds of the Jamaican landscape: the singing "all around me", beating up under my

nostrils, a-push against my breast, like the morning swell in Morant Bay and white water foaming "round my ears". And there is Deacon Bogie, "a John Crow a-hover over Cuna Cuna Pass"; and Pastor Humphrey's long neck shooting out and then drawing back into his cassock "like iguana in stonehole". The book abounds in these quick vivid pictures, in rich imagery, and in the treatment of the tropical landscape with a natural, loving and effective particularity.

But how are these country folk to be presented so that they will be natural and yet intelligible to those who do not know their dialect? Here was a technical problem of the first importance. Davie, John, Tamah, and the others would seem stiff and unreal were they to speak standard English; yet if they spoke Jamaican how few would understand! Victor Reid has found a solution which may have been inspired by books like *How Green was My Valley* but which is none the less original, and which is in itself a magnificent achievement. He has created a form of speech which is natural to the characters, which is easily understood, and which has extraordinary beauty. Reid has actually created a form of language which enables him to rise naturally above the limitations of dialect.

Throughout the book the level of writing is high. Words and phrases are used with economy and precision, and there are moving and memorable passages like that of the Bullhorn, or the description of the shells blowing: "Hear the shells how they blow! First a-moan with sadness and loneliness, of earth heavy with sorrow; then there is the swift ascension and no longer near the earth but is leaping tree-top to tree-top, a-leap to the wild stones high on one another, and your head is twisting all about, sending your eyes up after the sound of it . . ."

This imagery, this way of writing, is born of intense feeling. The author writes with emotion, but not in agitation. The imagery is that of one who sees and loves the countryside; the characters take part in a struggle which moves his imagination. The rhythm and lyrical quality of the language are natural because they spring from emotion and through them we are moved and our own imagination stirred.

The feeling which moves Victor Reid is love of country. He sees the past with its

bitterness and courage, as in Davie's speech before the Commissioners, "Man was no' built for slavery, Your Honours. In him are the image and Likeness, and it is no' of the skin. Inside of him there is the dignity of God . . ." and the words of Garth are full of this message too. This feeling of a new day lifts the last third of the book above the level of the merely topical. Garth, Fernandes, are political figures. Garfield the reactionary planter is in conflict with unionism. The riots of 1938 are described. But the political leaders of today and the contemporary events are shown against the background of a country slowly finding itself; slowly leaving behind it the darkness of 1865 for the New Day.

And this led me to meditation on this question. Have subject peoples ever created anything artistic except by way of protest or of escape? This book itself may have been the result of creative forces generated by a new feeling of dignity and of responsibility; instead of frustration satisfaction; instead of deep-buried resentments an open assumption of responsibility and a frank acceptance of the past as a preparation for the tasks of the present.

So, to those who want an exciting and well-told story I commend *New Day*! Those who wish to understand the West Indies and West Indians can do no better than turn to Victor Reid's fine novel, *New Day*. Those who, like myself, are West Indians and who believe in the New Day will find in this novel beauty and inspiration. Thank you, Victor Reid.—P.M.S.

FOCUS (1948—Edited by Edna Manley, Jamaica).

THE NEW WIND

Poetry with its swell and stab and thunder is for me the most sensitive indicator of a person's and a community's development and while reading the 1948 *Focus* poetry collection, I pulled *Focus I* down from the shelves to see what the intervening five years had meant to the writers whose work appears in both issues.

It occurred to me that there had been both a quickening and a strengthening, and although it defies the metaphor I would

even call it a mellowing of poetic tensions in M. G. Smith and George Campbell, and in Sherlock, Carberry, and Ingram. One has to recognise the fact that Edna Manley was assisted by a selection committee in her editing of *Focus II* and that their influence, together with the island's political advance, might easily result in a bias towards more direct expression of community restlessness and a more vigorous statement of aims. But bearing in mind that mysterious dialectic that exists between poets and their societies, I would venture the opinion that Jamaica bears her poets along on the crest of her advancing wave and that they speak words for her people which tomorrow they will find lodged in their hearts.

M. G. Smith takes pride of place in this 1948 collection and he is much more urgent now. In the '43 issue he was a priest, celebrant of the quiet and the set apart in nature and life, and he found a vocabulary that expressed peaceful trees and "deep longing for peace in the green hills"; the wind breathed a mellow oboe in his ear and the sea's half-breath, half-moan swept in fugues through his being. But here in 1948, music is "fuller than the sea is full" and whereas once the wind was a flute in the lime trees, water rushes through the land and the tameless horse appears as a symbol. In "Jamaica", "This Land", and "Home", M. G. Smith sees the hills flaming upward and one can easily strike off line after line that express urgency and gathered vitality. In the short-line poems, the sculpture is bare and almost like cactus on the landscape and in "Brother what are you building" the social criticism is mature.

George Campbell's book *First Poems*, which reprinted many of his 1943 *Focus* contributions, established him as one of the most important poets in the Caribbean, and curiously I turned to the five poems against his name in this *Focus II* to see if living in New York had affected him in any way. Of course, five poems are not an adequate base for judging trends but was it my imagination or was he achieving effects with a sense of form not fully apparent before? The poem, "The Sun", is not as lyrical as his 1943 "Litany", and in the poem beginning "O Heart wert love, were love all, love's heart", Campbell wears the habit of the metaphysical poet. Donne himself might have written the words "lovers are passionate jailers of their own hearts in a strange world" and des-

cribed love as "refugee of the ages and peripatetic in a boundless kingdom". The poem to Odilla is itself a tortured flute pipe for the woman the spirit has placed out of reach.

But I want to lay my bouquet of tribute before Campbell's fine, elegiac "Worker", which called Markham to mind and puts the seal of creative achievement on the labour movements in the Caribbean. A poem of the quality of "Worker" emerges like a crown over the Caribbean Labour Congress (as simply as leaves put out from a tree), only because the complex of thought and tradition in a community that we call its culture is now expressing itself on all levels.

"He wears the silken day, the veils
of night

His hands that hungered at your
heart a time

Are now the trees and paths, his
epitaphs".

Philip Sherlock maintains in his single contribution the religious strain that his poetry expressed best perhaps in "A Beauty too of Twisted Trees" in 1943. But he exchanges the image of the broken body on the twisted tree, which mingles in the mind memories of Jesus and Judas and any Negro lynching, for a passionately rhythmic vision of apocalypse where a sword of flame reminds that Eden stands by Gordon Town.

And Carberry and Ingram? For them too, the tempo is faster, the poetry is strong and direct. It is to me typical of these changes that Ingram has put away his earlier manner which described quietly the sheep God made in the early morning and the little yellow cups of witchery known as Okra flowers, and that he puts in their place wonder at the way the lizard lives both in the gloom-world of shade and the quivering flaming light, and also his awareness that within the domestic bundle of the cat lies the wildest forest jungle.

I have not touched on the strength of Basil McFarlane's work — McFarlane can write

"To know birth and to know death
In one emotion . . .

This is the final Man . . .," —

nor on Robert Verity's very fine "The Land the City Wounded" where he re-enacts on Jamaica's mountains the debate on the Mount of the Transfiguration, nor Virtue's "Magdalen", but then one must discern trends.

There were some 75 pages of poetry in this 280-page *Focus* and the other selections were plays, stories and legends. All three of the legends I enjoyed. M. G. Smith and Campbell displayed their poetic power in the "Dream of Lilith" and "The Sun Road" respectively and they both achieved here effects that no poem could hope for. On the other hand Margery Foster-Davis relied more on narrative in her "Legend of the Lignum Vital Tree".

The plays included in this issue are Cicely Howland's "Storm Signal" and Campbell's "Play without Scenery", both of which have been already performed, and I make no attempt to criticise them nor the stories; the story-lover can range at will from Vera Bell to Claude Thompson and Victor Reid and Roger Mais. But I can say that the stories and vignettes in *Focus II* are Jamaica's story with their frank portrayal of conditions and their direct social criticism. A people describes itself here, but perhaps I can take a few lines from Basil McFarlane and cap the impression I got . . .

"I am Jamaica

And I have seen my children grow
Out of their separate truths".

Edna Manley and her selection committee should be very proud of this co-operatively published collection that

illustrates what Sherlock recently called "the new wind blowing through the Caribbean".—A. J. SEYMOUR.

KYK-OVER-AL, Vol. 2, No. 7. (Edited by A. J. Seymour and published by B.G. Writers' Association) Price 1s.

Kyk-over-al, December, 1948, contains an excellent article on "Education" by Lilian Dewar, and a short note on "The Economic Basis of Culture" by C. H. B. Williams, both of which are evidence of deep and serious thought on some cultural problem. Westmaas's "On Writing Creolese", Cameron's "Cultural Life in Jamaica", and Seymour's analysis of the reactions of his friends to Hopkins' poem "Golden-grove" are all of more value to both writer and reader than the poetry reviews of Margaret Lee, Cleveland Hamilton, and Wilson Harris. The review of A. J. Seymour's "Guiana Book" by the latter suffers acutely from the writer's isolation in a wordy metaphysical world of his own making.

This journal deserves to be read throughout the Caribbean area, and we hope that this brief review will encourage readers to whom *Kyk-over-al* was hitherto unknown, to become regular subscribers.—A.C.P.

Literary Contributions

The Editors of the CARIBBEAN QUARTERLY intend to print original literary work or works of special merit or interest by West Indians every quarter. Whilst we shall be glad to receive manuscripts, we shall often reprint what has already appeared locally, thus giving the best a wider circulation, and at the same time avoiding competition with local journals.

In this number we reprint "The Yellow Cemetery", a poem by the young St. Lucian Derek Walcott, which appeared recently in a limited edition under the title 25 POEMS.

THE YELLOW CEMETERY

By D. A. WALCOTT

*"They are alive and well somewhere,
The smallest sprout shows there is really no death,
And if ever there was it led forward life, and does not wait
at the end to arrest it."*

Walt Whitman

I

All grains are the ash to ashes drowsing in the morning,
Wearing white stone. I passed them, not thankfuller to be
Their living witness, not noisy in salt like the near sea,
Because they are spaded to the dirt, our drowning. 5
As lovely as the living, and safer, to the bay's green mourners
They will unkeening bones, and they are happy.
Lost the candle and censer mysterytale, the swung smoke of adorners—
Of dying. Could they speak more than bramble, they'd be
One in the language of the sun and the bibleling froth.
Their now bread is broken stone, their wine the absent blood 10
They gave to days of nails.

It is enough

And greater is no grace, no surplice more serviceable than the lap and hood
Of the seasons that grew them, and now mother them to sleep.
And you alive, speak not of the unlucky dead, the sunless eyes rotten 15
Under downs and saddles in a kingdom of worms.
Speak of the luckless living, that are gnawed by a misbegotten
Moon and memory ;
It is a blessing past bounds, to miss the dooms
Of the vertical fathom, at each suncrow 20
To know no anguish, cool in clothstones that flow,
The sleep in the bone, all weathers.

But we, each

Flapping boast of the crowing sun, turn in our linen graves,
Face stale mornings, old faces, but these dead on the beach, 25
Are joyed at the dawn's blood skyed on their dearth of days.
We cocky populations fouling the fallow plans of heaven,
Shall find perfection in a cemetery under a hill.
For we have suffered so long, that death shall make all even,
There shall the love grow again that once we would kill. 30
This is no place for the eater of herbs and honey, for beads,
Here are water, crops, seabirds, and yet here do not be brave,
Seek no fames, and do not too often pray to keep alive,
Against the brittle wick of wishes the wind in the clock strives
And wins. Was not your father such ? 35
Gay in the burning faith of himself, but melted to forgetting ?
Thank time for joys, but be not thankful overmuch,
The sun, a clot of the wounded sky, is setting.
Delve no heart in the sound of your soul, a man's speech burns
And is over ; the tears melt, colden, and stales the tallow. 40
And the story of your ash to ashes breath that the wind learns,
The bushes from your eyes will tell in a deeper yellow.

II

And there at sea, under the wave,
The sea-dead, the legendary brave,
Under the windmaned horses of the sea 45
Float the bulged trampled dead, nudged by whales ;
Their wicks windkilled too, by salty gales,
And they were so braver, less alarmed than we.
For we want to run, who do not want to drown where
There is no angel or angelus or another's helphand ; 50

But they too ride easy, and the nunnery of brown hair
 Of the white girl of walls, shall be no more in the pardoner sand
 Black man's denial. Heart, let us love all, the weeds
 That feed the seaherds, miracler than man's tallest deeds,
 For here the living are blinder than the dead, ah 55
 Look a rainbow sevencoloured wakes glory through the clouds, and
 Breasts sea and hill and cemetery in warning,
 And the chained horses thunder white, no more adorning
 The harbour that grows truculent at the sevenhued sky,
 A canoe scuds home quickly, and indigo reigns. 60

Praise these but ask no more the meaning of mourning,
 Than you ask a moral from the seven glory of the clouds, and
 Go slowly to the hill as the gale breaks, crazy on the loud sand.
 Do not talk of dying, you say, but all men are dead or sick,
 In the brain and rib-hollow rooms 65
 The candles of the eye burn and shorten, and how quick
 The fine girl sleeps in her grave of hair, the grasshair tombs.
 O look at the sane low populations of the democratic dead,
 How all are doomed to a dome of mud, all brought to book,
 Believing in a world for the perverse saint and the holy crook. 70

Love children now, for the sun will batter their thoughtlessness away,
 For there, if place, He walks, who was a lifelong child,
 And when the sun is spearing them in growth, pray,
 There is the kingdom of haven in the tears of a child.
 The trees, alive in a wind of generations, spin a terror of grains 75
 In the air, in the blue and froth of the weather, the branch rains
 Yellow on the graves.

We, the raisers of a God against the hand,
 Wonder who is made or maker, for the God our ancestors learned,
 Moses of terror, burns in no bushes, 80
 We pray only when seas are turned
 Angry, and the wild wind rushes,
 And love and death we cannot understand.

The signatures of a lost Heaven remain,
 The beauty of the arch, the nature not sun not rain 85
 We want our God to be. And yet, were He scanned
 We the long builders of beyond this flying breath would look
 Beyond the written Heavens, the wideopen sea, the land like a green book,
 Would find the Author and the Author's purpose.

A swallow falls, and perhaps the sole spoken prayer 90
 Is the hand of a leaf crossing the cold curled claws.
 Where is the God of the swallows, is He where
 Lives the One whom you flew young from, who all life was yours ?

And yet for all these gifts, the gift that I can pray,
 The mountain music, the pylon words, the painting, they are 95
 Enough, and may be all, for they add grace by day
 And night give tears as harshly as a telling star.
 Were there nothing, and this the only
 Life, a man has still to save the cliché of his soul, to live
 With, I will say it, grace, to atone for the 100
 Sins that all the worlds awoke before he ailed alive,
 Climb there, go to the hill while another sun is warning
 That the wicks weaken, and in the halls of the heartsun, love,
 For love is the stone speech that outlasts our ash and mourning.

A NOTE FOR THE READER OF THE POEM

READERS who are unfamiliar with some of the more recent developments in English verse may find this poem difficult. Several careful readings are needed for the full richness of its meaning to become apparent. And some at least of these readings should be aloud.

"The Yellow Cemetery" embodies the reflections of the poet on human life and death, set off by the appearance of a cemetery by the beach, and the sea and earth and sky about it, in the Island of St. Lucia. These reflections are presented

to the reader in language which powerful though controlled emotion has wrought into a poem. The meaning lies partly in the sense of the words, but is chiefly experienced by the reader as he or she responds to the suggestions, colours and many associations of the words and the rhythm within which they are flexed. The rhythm is not in the firm structure of traditional verse form, but moves and changes with the mood of the thought. Thus a strong simple rhythm is established (l. 43), carrying on through the next line in such a way that "sea-dead" is made ponderously slow; but after these three short lines the rhythm is extinguished in the tongue-twisting consonants of "the bulged trampled dead, nudged by whales" (l. 46), returns again (l. 48), only to peter out in the chattering anxiety of little words in line 49. Lines 53-60 build up a set rhythm again. The reader is bound to respond to the changing rhythm, and where this rhythm falls short of what the poet wishes to express, the reaction of the reader will be a negative one. A study of the use of rhythm, internal rhyme and half-rhyme, assonance, and alliteration in lines 12 to 22 is worth while.

In this poem images play a most significant part as carriers of meaning. The image of the cock crowing at sunrise is introduced at line 20, recurring in lines 24 and 27, and, though "clock" is not named we receive a very clear impression of the poet's rejection of optimistic daily affirmation of the will to live. A lighted candle (l. 7, 34-40, 47, 66, 103), is full of implications as an image for life. In passing we note that the candle is passive, indefensible, easily blown out, &c.; similarly a whole series of images illuminate the conception of life springing out of death, starting with the initial quotation from Whitman, asserted in line 1 and emerging from time to time all through the poem. Cradle and grave are identified (l. 13-14) and bushes spring yellow like the candle from the grave (l. 41, l. 42). In the background stands a symbol of the Crucifixion and Resurrection developed by implications from line 8 to line 12. Note also stone, sea, &c.

The critical reader will not be finished until he has investigated the significance of deliberate ambiguities (e.g. l. 70, 75) and unintentional obscurities (26, 78-83), weighed the propriety of grammatical distortions, puzzled whether lines 59-60 suggest (consciously or unconsciously) a political solution of the racial antagonism to which lines 51-53 refer, and wondered at the magnificent transition from the yellow of the candle to the yellower bushes growing in the cemetery (40-42). And having judged the effectiveness of the means of expression, he will be able to consider the value of the thing said, the experience which the poet has transmitted to him. Perhaps he will then ask himself: why should a young and highly intelligent schoolmaster seem to be so in love with death, so full of a sense of the vanity of human struggle? Why does he pick his way so mournfully around the borders of faith, preaching a gospel of love? The answer may lie in part in an understanding of the man himself, in part in the knowledge of his island-society's present conditions and past history.

If the reader has read the poem and apprehended it, whether he accepts or rejects the attitude of mind which it expresses, his sympathy will have been engaged, his knowledge of human nature deepened, he will feel in touch with another West Indian of the highest integrity and sensibility, who, though his message may be different from the positive and patriotic affirmation of the Jamaican Vic Reid's *New Day*, nevertheless promises to give richly to the growing literature of the West Indies.—A.C.P.

Agricultural Education in Northern Ireland

PROFESSOR R. G. BASKETT

NORTHERN IRELAND is a small country with a population of about a million and a quarter people, nearly half a million of whom live in the industrial town and important port of Belfast. Nevertheless, about half the population of the whole country is engaged in farming or in business directly concerned with agriculture. The farms are small, about three quarters of them being under 30 acres, but each farmer owns his own land and has paid or is paying an annuity to the Government under one or other of the Land Purchase Acts of the latter end of last century or the beginning of the present century. The country has a cool temperature climate with an average rainfall of about 35 inches, which is fairly evenly distributed throughout the year. Cereal crops are not easily harvested because of the damp climate, but grass, root crops and flax can be grown very satisfactorily. Thus farming in Northern Ireland is concerned not so much with cereal crops, such as wheat and barley, as with the production of milk, eggs, bacon and beef, together with oats for feeding to livestock and potatoes both for seed and consumption by human beings, cattle and pigs.

In Northern Ireland the organisation and provision of agricultural education up to the University stage is the responsibility of the Ministry of Agriculture. Some years ago a man wrote that if he had to choose only one form of Government assistance for agriculture he would name education, since he felt that agricultural improvement was rather a hopeless venture without an effective agricultural educational policy. No matter how many schemes for improved production are launched, it is the farmer who is concerned with the actual production and, if he is to do this efficiently, he must not only display skill in the day to day operations on the farm, but must take advantage of the many aids which the results of scientific research have brought to the business of farming.

The agricultural educational policy of the Ministry of Agriculture is based on six main activities :—

- (1) The provision of classes for farmers' sons and others during the winter months.
- (2) The operation of three farm schools, two for women and one for men.
- (3) The award of scholarships to enable students to study at the University for an agricultural degree.
- (4) The provision of a farm advisory service throughout the province.
- (5) The carrying out of demonstrations connected with both crop and live-stock production.
- (6) Preparation of educational exhibits at the various agricultural shows, and providing lecturers to give talks on technical subjects to meetings of farmers and Young Farmers' Clubs.

WINTER CLASSES

There is no rural bias in the primary or secondary schools in Northern Ireland, and farmers' sons and others who wish to have some formal vocational training in agriculture can attend a winter class. There are usually four held in each of the six counties every year. The classes take place on two afternoons each week from November to March, and are conducted by one of the Ministry's county agricultural staff. The curriculum covers the basic principles of husbandry and deals with such subjects as the manuring of various crops, the feeding of livestock, field drainage, seeds mixtures and an explanation of the various marketing schemes. Very often formal instruction gives way to informal discussion on farming problems, and sometimes the class is taken on a visit to see some demonstration or to a farm where something of particular interest is taking place. The contacts which are made between student and teacher are very valuable and are often maintained after the winter course has been completed, since it is often on the farms of past students that the agricultural officer lays down his farm demonstrations which form part of the educational programme of the Ministry.

FARM SCHOOLS

The introduction to vocational training gained at the winter class sometimes leads a student to a desire for more advanced training. This he can achieve by attending Greenmount Agricultural College. The college is residential and offers a ten months' course of instruction, during which students have the opportunity of studying the elementary aspects of the agricultural sciences and of taking part in the day to day work on a well equipped and up to date farm. During the course visits are arranged to farms of special interest, to agricultural shows, central abattoirs and marketing centres, and an opportunity is made for students to see the work of the research divisions of the Ministry of Agriculture.

Entrance to the college is by competitive examination and interview and, while no specific scholastic standard is required for entry, students are expected to have sufficient basic education to profit from the course at the college. Lack of means does not act as a deterrent to prospective students, since the Ministry offers generous scholarships to all students who need them. In brief, the college provides a course in agriculture which aims at equipping a young man to undertake practical farming and fitting him either to farm on his own or to act as manager on a farm

belonging to someone else. It also serves as an excellent preliminary year for students who have already passed their University entrance examination but who need practical experience in agriculture before going up to the University to study for a degree in agriculture. Quite apart from formal study, the college offers opportunities for making friendships and breeds that tolerance which comes from living and working in a community where all have the same interests at heart.

There are two agricultural schools for girls in Northern Ireland. One, the North West School, is situated at Strabane, and the other, the Ulster Dairy School, at Cookstown. Both these schools are residential and have farms attached to them. The North West School holds about 25 students and the course extends over ten weeks, during which the girls receive lectures and do practical work in poultry keeping, dairying and housewifery. The work is essentially practical in character and students are given an opportunity of becoming proficient in all the tasks which fall to the lot of women on the farm. Here again, scholarships, which cover maintenance and tuition, are available to all students who need them. The Ulster Dairy School gives two courses, one which lasts for a year and covers the same subjects as those in the course at the North West School but in greater detail and the other is for senior students who stay on for a further year and specialize in poultry and dairy husbandry. Students taking the first course usually go back to the farm, but those who take the senior course do so with the idea of becoming either poultry or dairy instructresses in the Ministry's advisory service or of managing the poultry flock or dairy on large farms.

An interesting experiment is shortly to be made at the Ulster Dairy School by introducing a series of lectures on general agriculture into the course. The object behind this experiment arises from the fact that poultry keeping is almost universal on the farms in Northern Ireland and this is true to a somewhat lesser degree in regard to milk production. There are few specialist poultry farms and the reduction in imported feeding stuffs, on the supply of which the economy of such farms is based, will not encourage any expansion in this direction. Thus poultry husbandry and the handling of milk form an integral part of the farm activities, and it is felt that girls who are going back to the farm should have the opportunity of realising how their own particular work fits in with the general pattern of the farm economy, and this can best be done by a series of lectures on general agriculture, which will dwell particularly on the relationship of poultry husbandry and dairy husbandry to crop production and other activities on the farm.

THE UNIVERSITY

There is a very close link between the Ministry of Agriculture and the Queen's University of Belfast in that many members of the research staff of the Ministry are also professors or lecturers in the Faculty of Agriculture. This somewhat unique arrangement has worked very satisfactorily for the past 25 years and has the advantage of bringing education, research and specialist advisory work together in a closely knit organisation. Two courses leading to an agricultural degree are offered by the University, both of which occupy four years. The first, the general degree, aims at training a man for posts in a state agricultural service or to farm on his own account. The second is a specialist degree in which the first three years of the course are spent in the pure science departments of the University and the last studying crop and animal husbandry and the particular agricultural science in

which the student aims to specialize. Many graduates are now holding posts in the state agricultural services both in Northern Ireland and Great Britain, some are employed as agricultural specialists in commercial firms, while others are employed in the Colonial Agricultural Service.

Both the University and the Ministry of Agriculture offer under-graduate scholarships which may be held in the Faculty of Agriculture, and the University also awards post graduate research scholarships to suitably qualified graduates of the University.

ADVISORY SERVICES

An agricultural department has to try as far as possible to help each individual farmer with his specific problem. Much can be done by the distribution of leaflets which have been written on special subjects, but one of the best methods is by discussion on the farm where the problem has arisen. In each district in the six counties of Northern Ireland there is an agricultural officer who is on the advisory staff of the Ministry. It is his job to visit farmers in his area and do his best to solve any problem and give advice generally. Perhaps the difficulty is one which he has not met before, in which case he can refer it to a more senior officer, who perhaps, in turn, may seek the help of one of the specialist research staff. This method of approach is useful to all concerned, since the farmer can rely on getting the best available advice, and at the same time the research worker may encounter a problem which requires serious investigation, of which he might otherwise have been unaware.

Education is a slow process and any system must be devised to meet a special set of circumstances. Better results will accrue from one which is, so to speak, indigenous to a particular territory than by the adoption of a system which has worked well elsewhere but may not be flexible enough for application in another country. The aim, however it may be achieved, is to build up an enlightened farming community which is ready at all times to meet changing circumstances and reap the benefit from the results of the extensive research work in agriculture which is going on all over the world.

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